

New Calorimeter Combines Advantages Of Old Types, Designers Claim

BOSTON—Speaking for J. L. Gibson of Frigidaire Corp. who was expected to give Harry William's paper on "The Direct Expansion Calorimeter for Measuring Capacities of Small Refrigerating Machines," E. R. Ryan presented the paper here Saturday morning, June 11, before the spring A.S.R.E. convention. After describing briefly two known systems, the paper gave details of a new calorimeter which has several features of interest.

The designer of a refrigeration machine is necessarily interested vitally in the capacity of the machine under a given set of conditions, it was pointed out. "The accuracy of the testing device should be unquestioned, and the work involved should not be too lengthy or laborious."

Use Dry Expansion Coil

"One method consists in placing a dry expansion coil in a heavily insulated tank of kerosene, immersing electric heaters in the kerosene, and stirring the kerosene by a mechanical agitator."

"The heat balance in this equipment is obtained by regulating the suction pressure to the desired point, and then adding enough heat to maintain a constant temperature in the kerosene bath. The capacity of the machine is then computed by adding the heater input to the heat leakage of the calorimeter."

"The advantage of this calorimeter is that it operates on a dry or direct expansion evaporator and provides a positive means for the recirculation of oil. Another advantage of this type of construction is that changing from the refrigerant to another involves very little time or labor."

"The main objection to a calorimeter of this design is that a large thermal lag is inherent in its construction. This

means that obtaining the heat balance with a small compressor is a somewhat lengthy and tedious process."

Second Type of Calorimeter

"Another type of calorimeter consists of a plain tube evaporator, the liquid level in the evaporator being maintained through the use of a standard low-side float valve. Electric immersion heaters are mounted in the evaporator directly in the liquid phase, the entire evaporator being well insulated."

"Thermal balance on this type of calorimeter is obtained by adding enough heat to the evaporator to maintain a constant suction pressure. The capacity of the machine at that suction pressure will be the sum of the electrical input plus the heat leakage of the calorimeter. This calorimeter has distinct advantages which should not be overlooked, the most important of which are as follows:

- "1. It is easy to operate.
- "2. It can be constructed so that the heat leakage is a small percent of the total load.
- "3. It can be made small, compact, and portable."

Enumerates Disadvantages

He pointed out, however, that it would be desirable to eliminate certain disadvantages in this type of equipment, namely:

- "1. The tendency for oil concentrations in the evaporator to increase.
- "2. There is no means for controlling the temperature of the suction vapor leaving the calorimeter.
- "3. The heat lag of the apparatus is somewhat high, due to the fact that the temperature of the evaporator, refrigerant, and insulation must undergo a

change for each different suction pressure."

"4. Changing the refrigerants and lubricants is a lengthy process, because a float valve change is usually involved, and the oil must be removed from the evaporator."

"5. Several different sizes of calorimeters must be maintained to care for the various sizes of compressors."

Combines Advantages of Both

The speaker pointed out that the new calorimeter is designed to combine the advantages of both of the first two types. It consists of a vertical gas-tight cylinder with the evaporator in the upper half, and the heating elements in the lower half of the cylinder.

"The evaporator is built up of a number of expansion coils connected in parallel and installed and manifolded in such a manner that any one coil or combination of coils may be used, depending on the size of the machine being tested. An automatic expansion valve is used to supply the liquid refrigerant to these coils," he said.

"Immersion electric heaters are installed in the lower part of the shell, in sufficient number to furnish the required heat input for the largest machine to be tested."

Liquid Refrigerant Introduced

"Liquid refrigerant is introduced into the container to a sufficient depth to maintain the liquid phase at a point above the heating elements. The lower part of the shell was designed to reduce the refrigerant requirements to a minimum. The refrigerant is sealed into the shell, the only openings to it being a gauge connection, and a pressure relief connection."

"The expansion valve and line going to the evaporator are heavily insulated, and a small amount of insulation is also placed around the shell."

"The wiring diagram for this calorimeter does not differ from the other calorimeters mentioned. It is important, however, to keep the motor voltage constant, preferably through the use of the conventional type of voltage regulator. It is also advisable to incorporate in the heater circuit, a safety device which will break the heater circuit when the pressure in the calorimeter reaches a predetermined point."

Test Procedure Same

"The test procedure is substantially the same as for the other types of calorimeter, the following data being obtainable, and usually being sufficient:

"Condensing pressure, room temperature, suction pressure, compressor speed, heater watts, motor watts, motor voltage, temperature of condensing medium in, temperature of condensing medium out, gallons of water per hour (for water-cooled units), exhaust vapor temperatures, temperature of vapor leaving calorimeter, temperature of vapor at crank-case, temperature of liquid entering calorimeter, and the pressure of the secondary refrigerant."

"Condensing pressures are measured on accurately calibrated test gauges of the necessary range. Low suction pressures are measured on open-end mercury manometers, the higher suction pressures being measured on calibrated test gauges."

Gauge Measures Pressure

"The pressure of the secondary system is also measured on a calibrated gauge. Temperatures of the room, condensing medium, etc., are taken on a good grade of glass thermometer. The additional temperature readings are taken with thermo-couples and potentiometer."

The engineers explain that it is advisable, in using a calorimeter of this type, to place the calorimeter and the compressor being tested both in a constant-temperature room.

After the compressor has been started, the automatic expansion valve is adjusted to give the desired suction pressure. Input into the heaters is regulated in such a manner as to raise the pressure in the secondary compartment to a point corresponding to the room temperature—that is, if the refrigerant used in this compartment has a pressure of 50 lbs. per sq. in. in an 80° room, enough heat is added to keep the pressure at 50 lbs. per sq. in. If the test is being conducted in a 100° room, the pressure corresponding to 100° is maintained. After this point has been reached, the heat is adjusted to maintain this pressure.

Complete Thermal Balance

After the heat input has been regulated in the above manner, the compressor is allowed to operate for a period long enough to insure a complete thermal balance. At this point the additional data previously mentioned, is recorded.

"If the temperature of the suction vapor in making a test of this kind, is lower than that of the room, it means that the evaporator surface in the expansion coil is too small," it was stated. "The calorimeter is made so that if this condition arises, additional evaporator surface can be used."

"After the capacity of the compressor at this suction pressure has been determined, the expansion valve may immediately be reset for another suction pressure. The procedure is then repeated. The suction pressure on the secondary refrigerant is not changed for different

gauge connected to the calorimeter shell."

"After the required data has been taken, the compressor capacity can be determined in the normal way. If it is desired, the test data may be charted in a manner which best suits the purpose of the test."

"In operating a calorimeter of this type, the expansion coil serves the purpose both of an evaporator and a superheater. That is, the liquid refrigerant is introduced into this coil and allowed to evaporate, and the vapor is superheated to a temperature corresponding to the pressure of the secondary refrigerant."

Use Evaporator Surface

"In operating a calorimeter in this manner, it is possible to utilize very effectively the evaporator surface because of the extremely high temperature differential that is maintained."

"That is, the liquid refrigerant is entering the expansion coil at a temperature corresponding to the pressure at which the expansion valve is set, while the medium to which the expansion coil is placed is being maintained at a temperature corresponding to room temperature."

"This temperature differential gives a high transfer factor. In addition to this, when the medium surrounding the expansion coil is kept at the same temperature as that of the room, the heat leakage from this compartment is reduced to a minimum."

"It is apparent that when the suction pressure is changed, it is not necessary to change the temperature of a large mass of material. The only part of the apparatus which will undergo a temperature change is that part of the expansion coil in which the actual evaporator takes place."

"This factor reduces the thermal lag of the system to a minimum, and makes it possible to obtain the heat balance in a relatively short period of time. The apparatus is so sensitive that the use of too much or too little heat will immediately be observed on the pressure

gauge connected to the calorimeter shell."

The designers also point out that in a calorimeter of this type, the temperature of the suction vapor can be controlled, and in making this temperature the same as that of the room, it is definitely certain that there is no heat lost or gained in the lines connecting the compressor to the calorimeter."

"Other advantages of this calorimeter are those peculiar to any expansion coil, that is, there is no large amount of work involved in changing refrigerants and lubricants."

Lists Advantages

Advantages claimed for this new type of calorimeter were listed as follows:

1. Easy to operate.
2. Calorimeter can be made small and portable.
3. The same calorimeter can be used without difficulty on both large and small compressors.
4. The thermal lag is reduced.
5. The calorimeter is sensitive so that an accurate heat balance can readily be obtained.
6. Heat leakage from the calorimeter to the room is very low.
7. Little trouble is encountered in changing refrigerants and lubricants.
8. No trouble is encountered with oil concentrations in the evaporator.
9. The pressure drop through the expansion coil is reduced to a minimum due to parallel flow.
10. The temperature of the suction vapor can be controlled.

CODE ELECTRIC PRODUCTS MOVES TO YORK, PA.

YORK, Pa.—The removal of the Code Electric Products Corp. factory from Philadelphia to this city has been announced by Morgan J. Lewis, president of the corporation. The Code line includes electric switches, connection cabinets, etc.

MANUFACTURERS OF "GENUINE DETROIT" AUTOMATIC EXPANSION VALVES, "GENUINE DETROIT" THERMOSTATIC VALVES, AMERICAN FLOAT VALVES, HIGH AND LOW PRESSURE TYPES, AMERICAN CAST-IN-COIL DOMESTIC UNITS, AMERICAN DOMESTIC REFRIGERATION UNITS, AMERICAN REFRIGERATION SECTIONS, COMMERCIAL TYPE, MERCOID CONTROLS

Descriptive literature gladly sent upon request

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Trumbull, Lincoln, Marquette & Viaduct
Detroit, Mich.

Division of AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

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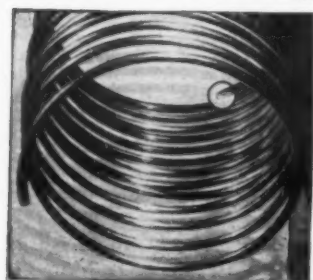


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There are French Copper Refrigeration Tubes . . . small diameter and thin wall seamless tubes . . . for every refrigeration requirement. Stock sizes are 1/4 in., 3/8 in., 7/16 in., 1/2 in., 5/8 in. and 3/4 in., all in .035 gauge. Heavier gauges can be made to order. Stock coils are 25, 50 and 100 ft. long. Other lengths can be supplied on short notice. Additional information on request. The French Manufacturing Company, General Offices: Waterbury, Connecticut.

FRENCH REFRIGERATION TUBES



Type RZHR capacitor motor—quiet and vibrationless—drip-proof—rubber-cushioned—wool-yarn lubricated—unbreakable steel frame and base. Conduit box is integral part of condenser box, accessible from the front.

Capacitor Motors

Wagner builds both types—capacitor and repulsion-start-induction. Also split-phase, squirrel-cage and direct-current.

Wagner's line of motors is complete. Whatever your need, there's a Wagner motor built to meet it.

Wagner Electric Corporation
6441 Plymouth Ave., St. Louis, Mo.

Repulsion-Induction Motors

Type KAR repulsion-start-induction motor—quiet and vibrationless—rubber-cushioned—wool-yarn lubricated—unbreakable steel frame and base—can be had with open, drip-proof or totally-enclosed end-plates.



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LEONARD SHOWS 50% INCREASE IN DEALER OUTLETS

38 Distributors Report Gain in Number of Dealerships

DETROIT—The number of Leonard dealers is 50 per cent greater than the total number of Leonard outlets as of June, 1931, states R. I. Petrie, sales manager of the Leonard Refrigerator Co.

Increases in dealer outlets this spring as reported by 38 Leonard distributors in all parts of the country are as follows:

New Dealers

BOSTON—Howe & Co., Leonard electric refrigerator distributor here, announces the following new dealer appointments:

L. A. Hutchinson, Milford, N. H.; Suburban Hardware Co., Needham, Mass.; W. D. Knowlton, Walpole, N. H.; Hannsford Auto Service Co., Milford, Mass.; Milton Radio & Appliance Shop, Milton, Mass.; Victor Furniture Co., Brookline, Mass.; F. W. Stimson, Boston.

Union Radio Shop, Union, N. H.; R. G. Frost, Fremont, N. H.; Stengel Hardware Co., Cambridge, Mass.; Waldron Auto Supply Co., Inc., Revere, Mass.; Ayer Maytag Co., Ayer, Mass.; David Gelewitz, Hensler, & Co., and Essex Furniture & Radio Co., all of Boston. Central Hardware Co., Everett, Mass.; Clarkson Furniture Co., Waltham, Mass.; Eastern Tire Co., Worcester, Mass.; Thompson & Hydam, Upton, Mass.; Suffolk Furniture Co., Cambridge, Mass.; Jackson Caldwell Furniture Co., Somerville, Mass.; Chelsea Phonograph & Radio Co., Chelsea, Mass.

Standard Sales & Service, Haverhill, Mass.; Long Furniture Co., Boston; Fred W. Beck, Marlboro, Mass.; B. B. H. mont Hardware Co., Burlington, Vt.; Lee S. Ramsey.

E. B. Latham & Co., New York City; R. C. Wahlig; Zion Cooperative Mer-

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Contest Winners

DETROIT—The greatest increase in the number of dealers over a month's time in the history of the Leonard Refrigerator Co. was reported by R. I. Petrie, Leonard sales manager, as a result of the Leonard Dealer Coverage contest which ran during the month of May.

The winning wholesale representative in each district received a wrist watch. Winners as announced by the Leonard Co. are as follows:

Southern Wholesalers, Inc., Washington, D. C.; G. D. Adler; C. W. Smith, Inc., Cleveland, J. C. Richardson; Ver-

(Continued on Page 16, Column 3)

CELOTEX CO. PLACED IN FRIENDLY RECEIVERSHIP

CHICAGO—The Celotex Co., insulation manufacturer, has just been placed in a friendly receivership by the action of McManus, Inc., advertising agency, in filing a bill of complaint for a claim of \$7,030. The Celotex Co. immediately filed an answer admitting insolvency, and consenting to the appointment of receivers.

The receivership will not affect the selling or operating policies of the company in supplying insulation for refrigerators, states J. H. Bracken, general manager of the industrial department.

The bill of complaint states that the company has assets of \$11,130,000, and debts of \$2,423,500, but that although assets exceed liabilities, the firm does not have sufficient cash on hand to meet maturing obligations. Colin C. Bell, Wilmington, Del., and Hobart P. Young, Chicago, were appointed as receivers.

ZEROZONE MOVES NEW YORK SALES OFFICE

NEW YORK CITY—Offices of Zerozone, Inc., sales division of Zerozone Products Corp., have been moved to 205 E. 42nd St. The new salesrooms occupy most of the eleventh floor of the Bartholomew Bldg.

Specifications

SPECIFICATIONS for the 240 models of electric refrigerators made by 33 companies as published in the May 18 issue will be revised and reprinted in the June 29 issue.

Similar data for 11 additional companies has been received, making a total of 44 makes to be tabulated in the coming issue.

The new data covers models made under the following brand names: Stewart-Warner, Illinois Moulding, Kulair, Jewett, Uniflow, Dayton, Rice, Bauer Bros., Parker, North Pole, and Commerce.

So much in demand was the May 18 issue of the News that the supply of 4,500 extra copies was soon exhausted, with hundreds of orders remaining unfilled.

Extra copies (price: 10c each) should be ordered in advance. Please send check with order.

Dollar Special: Send \$1.00 for a 17 weeks trial subscription starting with the June 29 issue.

200,000 USERS ENTER CONTEST OF LEONARD

DETROIT—More than 200,000 users of Leonard ice boxes have registered in the contest in which \$500 will be given for the oldest Leonard ice box found, according to factory officials, who based this estimate upon reports from distributors.

The contest deadline is July 1. All Leonard distributors and all but a few Leonard dealers have enrolled in the campaign, factory officials state.

In addition to the grand prize of \$500 offered by the Leonard Refrigerator Co., there will be prizes of new Leonard refrigerators given away by each Leonard distributor to the owner of the oldest Leonard ice refrigerator in his territory, except in the case of the territory which wins the cash award.

A. M. Taylor, Leonard's director of advertising, in discussing the purpose of the contest points out that "Leonard distributors and dealers cannot locate the oldest ice box without first locating and contacting a great number of users. "And they cannot call on those users without finding a large proportion of immediate prospects for Leonard electric refrigeration."

GIBSON DISPLAY OPEN DURING POLITICAL CONVENTIONS

CHICAGO—The Gibson electric refrigerator display at 616 S. Michigan Ave., established for the R.M.A. convention a few weeks ago, was held over for the Republican and Democratic national conventions.

M'CREA 'TROOPS' VICTORS IN G. E. SALES CONTEST

Merriam, Neily and Cole Finish High in Campaign

CLEVELAND, June 21.—C. L. Mc-Crea, Washington, D. C., distributor, won the title of Generalissimo of the Allied Armies of Refrigeration during the final week of the General Electric war campaign, penetrating the enemy's lines 263 miles, and nosing out A. Wayne Merriam, Albany, N. Y., as national commander.

Merriam and his troops put up a desperate fight during these final days to maintain the lead which they enjoyed through most of the campaign, but fell 34 miles short of the objective reached by the crack troops of the National Electric army.

A heroic fight was put up by the Modern Home army under the command of Lt. General J. E. Neily, Hartford, Conn., resulting in the third largest advance of the campaign. The Rex Cole army, New York City, made the fourth greatest advance of the campaign, although it had to defend the longest sector along the entire war front.

On the Pacific Coast front, General H. H. Courtwright, Fresno, Calif., maintained his lead by a large margin over his rivals, Lt. General L. H. Bennett, San Francisco, and Lt. General George Belsey, Los Angeles, when he penetrated the enemy's lines over 100 miles during the final week of the war.

A clever bit of war strategy on the part of S. C. Griswold, Dallas, Tex., changed the command on the Southwestern front from Lt. General H. A. Pendergraph, Nashville, Tenn., to General Griswold, surprising the entire

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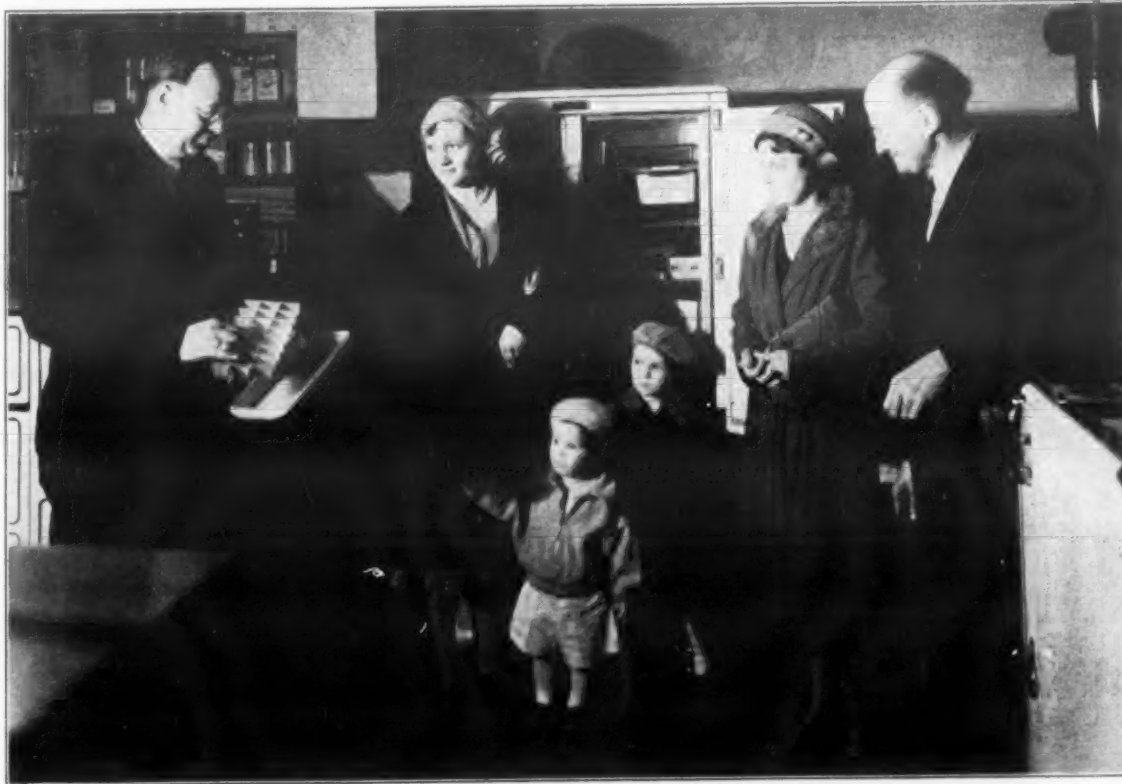
George Riddle Joins Gibson Staff

GREENVILLE, Mich. — George B. Riddle has been appointed assistant director of sales promotion for Gibson Electric Refrigerator Corp., according to announcement by W. R. Marshall, sales promotion manager.

Mr. Riddle came to Gibson from the Rath Co., Waterloo, Iowa. For a number of years he was editor of the Oil-O-Matic News for the Williams Oil-O-Matic Heating Corp., Bloomington, Ill., and has also been advertising manager of the A. E. Staley Mfg. Co., Decatur, Ill.

He is a graduate of the University of Illinois.

A Family Demonstration



John J. Gude of the South End Hardware Co., of St. Louis, Leonard and Kelvinator dealer, enlightens some present and future prospects on the use of the ice cube tray.

Bastian-Blessing, Russ Merger Approved

CLEVELAND, June 20.—Stockholders of the Russ Mfg. Co. today approved a merger with the Bastian-Blessing Co. of Chicago. Both companies, manufacturers of soda fountains and parts, will retain their corporate identity. Bastian-Blessing stockholders approved the step June 15.

Under the new arrangement, Bastian-Blessing will move its soda fountain manufacturing business (which accounts for one-third of its total business) to the Russ plant in Cleveland, while its Chicago plant will be maintained to concentrate on parts for soda fountains (comprising the other two-thirds of its business).

Lewis G. Blessing is president of Bastian-Blessing Co., and Charles R. Bastian is chairman. Mr. Bastian, it was stated, invented the first automatic carbonator used at a soda fountain.

Lawrence D. Ely heads the Russ Mfg. Co., and in commenting on the merger said, "By forming another large company second only to Liquid Carbonic Corp., it is obvious that this will help stabilize the industry and will effect necessary economies."

FRIGIDAIRE COOLERS USED AT CONVENTION

CHICAGO—Two Frigidaire air conditioners had ringside seats at the Republican National Convention last week in Chicago, being installed in the broadcasting booths of two radio chains, and will again be in service during the Democratic pow-wow the week of June 27.

The master control and broadcasting booths of both Columbia Broadcasting System and the National Broadcasting Co., overlooking the platform and huge seating area of Chicago Stadium, were equipped with Frigidaire units.

The booths, soundproof and almost air tight, were the nerve centers for the 100 network stations of the Columbia chain and of the 88 stations of the N.B.C. red and blue nets.

The Frigidaire units offered relief from the heat and humidity to Ted Husing, Louis Kaltenborn, Frederic

(Continued on Page 16, Column 4)

MARSHALL FIELD & CO. TO SELL LEONARDS

CHICAGO—Marshall Field & Co., one of Chicago's leading department stores, has taken on the Leonard line of electric refrigerators, according to R. I. Petrie, sales manager for the Leonard Refrigerator Co.

The Leonard line will be sold through the furniture department of Marshall Field & Co.

LAW CALLS FOR PAYMENT OF 5% TAX EACH MONTH

Manufacturers Required To Make Report Of Sales

DETROIT—The five per cent tax on household mechanical refrigerators went into effect Tuesday, June 21.

It is understood that a further interpretation of the tax law as it applies to the electric refrigeration industry has been made by the bureau of internal revenues, but such an interpretation had not been received at the Detroit office of the bureau at press time.

If a further interpretation has been made, it probably will be published in the next issue of ELECTRIC REFRIGERATION NEWS.

Sections of the tax law applying to the electric refrigeration industry follow:

Sec. 608. Tax on Mechanical Refrigerators

There is hereby imposed upon the following articles, sold by the manufacturer, producer, or importer, a tax equivalent to 5 per centum of the price for which so sold:

(a) Household type refrigerators (for single or multiple cabinet installations) operated with electricity, gas, kerosene, or other means (including parts or accessories therefor sold on or in connection therewith or with the sale thereof).

(b) Cabinets, compressors, condensers, expansion units, absorbers, and controls (hereinafter referred to as "refrigerator components") for, or suitable for use as part of or with, any of the articles enumerated in subsection (a) (including in each case parts

(Continued on Page 16, Column 1)

Buying Wave

DETROIT—June 21.—A last minute "buying rush" on the part of prospects who wished to avoid the government tax on household mechanical refrigerators—which went into effect today—was reported by several distributing organizations here yesterday.

Caswell, Inc., G. E. distributor for the state of Michigan, reported the biggest day in the history of its organization, with approximately 500 sales being closed. In the metropolitan area, stockrooms and showrooms were almost depleted in the rush to fill orders, Tom Phillipson, Caswell's retail sales manager, reported.

Sales at the Frigidaire branch were "five to six times that of any other day in 1932," reported H. J. Walker, Jr., manager of Frigidaire Sales Corp., Detroit district.

Geoffrey Strelinger, manager of the Kelvinator sales branch of Detroit, reported the biggest day in the 1932 selling operations of the branch.

"Our biggest day in 1932 by quite a margin," was the comment of H. M.

(Continued on Page 16, Column 4)

REFRIGERATION CONGRESS REPRESENTATIVE ROBBED

CHICAGO—Juan Emilio Capurro, trade representative of the president of the Argentine republic, now in the United States to prepare for the Sixth International Congress on Refrigeration to be held in Argentina in September, was beaten and robbed by two men in Grant Park, June 19.

Money, jewelry, his letter of credit, and letters of introduction were taken, according to Eduardo Gruning Rosas, Argentine consul.

Mr. Capurro had gone for a walk before retiring, not knowing that the park is a camping ground for hundreds of the unemployed.

He was in Chicago to address a large meeting of Illinois and Michigan manufacturers, and was to have left June 20 for New York City, where his wife and daughter are awaiting him.

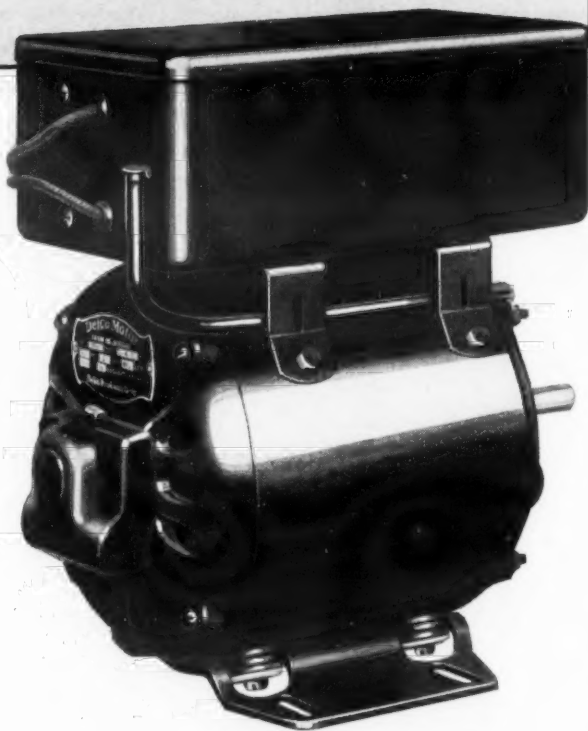
FRANK TO SUPERVISE SALES AT YORK BRANCH

PHILADELPHIA—Vernon L. Frank has been appointed supervisor of the commercial machine division of the Philadelphia branch office, York Ice Machinery Corp.

Mr. Frank was at one time with the Spear Refrigeration Division as one of its organizers in charge of national sales promotion and engineering, and was later supervisor for the main line division of the Philadelphia Electric Co.



A REFRIGERATOR MOTOR MUST NOT FAIL

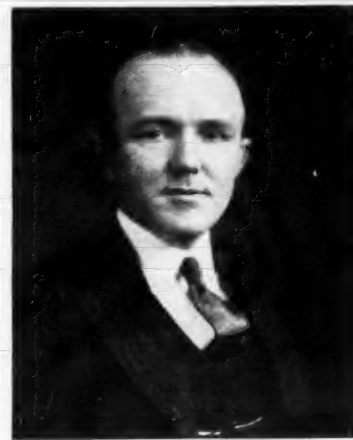


UNFAILING performance builds refrigerator reputations!

"Freedom from trouble" means more toward winning the sale than the most fluent of promises to repair trouble... for no service guarantee ever written compensates for the inconvenience that results when a refrigerator stops. Householders are learning that this is true, and the majority of them are buying electric refrigerators powered by Delco motors. The Delco name-plate may have little to do with influencing their selections. But the reputations for unfailing performance, that are upheld by Delco's time-proved motor construction, count heavily today when refrigerator buyers are choosing more shrewdly than ever before.

**DELCO PRODUCTS
CORPORATION**
DAYTON, OHIO

Leads Expansion



W. H. BONDURANT
Head of dealer division of Hot-point electric ranges

HOME APPLIANCES TO BE DISPLAYED ON YOUNG'S PIER

ATLANTIC CITY, N. J.—A permanent exhibit of products relating to the home, America's National Exposition, will be opened July 1 at Young's Million Dollar Pier here.

The exhibition consists of 28 exhibition spaces, opening from a long, tree-lined promenade. At the end of the 175-ft. promenade is a completely furnished and equipped bungalow, with garage and outdoor nursery. Hostesses on duty at the bungalow will give detailed information to visitors on the fixtures and furniture in the home.

A guest register, which will be signed by all visitors to the exposition, will also furnish space in which visitors may indicate what part of the display particularly interested them. These names will be forwarded to the manufacturers occupying exhibition space.

DR. MEHL APPOINTED AS DIRECTOR AT CARNEGIE

MIDDLETOWN, Ohio—Dr. Robert F. Mehl, assistant director of research, American Rolling Mill Co., has been appointed director of the bureau of metallurgical research of the Carnegie Institute of Technology, Pittsburgh, and will assume his new position on July 1.

Plans to extend the bureau's work have been made possible by a grant from the Carnegie Corp., New York. The bureau will be a corollary to the coal research laboratory which was founded two years ago.

TRUPAR LAUNCHES DRIVE FOR FOREIGN BUSINESS

DAYTON—An intensive drive for representation in all parts of the world is being launched by the Trupar Mfg. Co., manufacturer of Mayflower electric refrigerators, according to Harry J. Hunt, president.

The recent appointment of Homer H. Hardy as export manager, and the organization of a new export department were the first two steps in this new development.

While the company has had distributors for some time in England, Belgium, Holland, Finland, Switzerland, South Africa and the Argentine, it heretofore has made no organized export effort, according to Mr. Hunt.

INTERMOUNTAIN ELECTRIC TO DISTRIBUTE GIBSONS

SALT LAKE CITY—Intermountain Electric Co., for 30 years an electrical distributing house in the intermountain territory, has been appointed distributor for Gibson electric refrigerators in that area, according to announcement by Les Taufenbach, western district manager for Gibson Electric Refrigerator Corp.

C. B. Hawley is vice president and general manager, and W. W. Crocheron is sales manager of the firm. The company also handles American Steel & Wire Co. products, Westinghouse supplies, Willard batteries, L. & H. ranges, Apex washers, etc.

SAFeway STORES PURCHASES YORK EQUIPMENT

YORK, Pa.—The Safeway Stores, Inc., Midwest chain food store organization, recently contracted with the York Ice Machinery Corp., York, Pa., for two one-ton refrigerating plants to be installed within the next few weeks in their Lincoln, Neb., and Marlin, Tex., stores.

York one-ton self-contained units with cooling units for the refrigerator boxes and display counters will furnish the refrigeration.

ALL-G. E. KITCHEN IN BOSTON STORE OPENS

BOSTON—The first all-General Electric kitchen in New England was opened here last week as a part of Hovey's Home Electric Shop, a new department in the C. F. Hovey department store.

The kitchen contains a refrigerator, range, dishwasher, etc. A lecture hall with a seating capacity of 125 has been designed in connection with the kitchen, and Miss Virginia Lee Marche, General Electric home economist, will have charge of cooking demonstrations in the shop. She will be assisted by Miss Mabel Neal, electric refrigeration specialist, and Miss Consuelo Kelly, demonstrating the uses of laundry appliances.

The model kitchen is black and white, with a monel metal rustless sink and drainboard, and plenty of cupboard space.

Cooperating with the Hovey Co. in planning the new shop were Charles Meuse, manager of the home appliance division, and Frederick Maguire, manager of the refrigerator and electric cookery division of the Gentsch & Thompson, Boston General Electric distributor.

Leonard Dealer Also Sells Coal, Ice

STAMFORD, Conn.—Coal or wood for heat, electric refrigerators or ice for cold, can be furnished by the Springdale Ice & Coal Co., 943 Hope St., Springdale, a suburb of Stamford. Leonard electric refrigerators are sold by the firm.

"We Blow Hot . . . or . . . We Blow Cold!" is the caption on one of their newspaper advertisements. "If it's heat you need, we're ready with coal for furnace, range, or fireplace, and wood for roaring open fires. If you need cold, again we are ready with purest artificial ice or a complete line of Leonard electric refrigerators."

Sound Selling Plan Aids Burner Dealers, O'Brien

CLEVELAND—A sound, systematic selling plan, carefully followed out, was found to be the prime requisite of a successful oil burner dealer this year, by J. L. O'Brien, general manager of the Torridheat Oil Burner Division, Cleveland Steel Products Corp., on a field trip in which he contacted eastern dealers recently.

In almost every case where dealers are showing a substantial gain over last year, Mr. O'Brien said, the dealer was using a definite plan designed particularly for 1932 selling. At least 20 per cent of all well-planned personal calls developed into actual prospects, dealers told Mr. O'Brien.

BROWN & SHARPE MFG. CO. EXECUTIVE DIES JUNE 2

PROVIDENCE, R. I.—Luther D. Burlingame, industrial superintendent of the Brown & Sharpe Mfg. Co., died of pneumonia at his home here, June 2, aged 67 years.

After graduation from Providence High School in 1884, he entered the employ of the Brown & Sharpe Co. as an apprentice in the drafting department. Four years later he was made chief draftsman, continuing in that position for 25 years.

In 1925 he became industrial superintendent, chairman of the safety committee, and specialist in patent work. He held various responsible assignments with the American Society of Mechanical Engineers, and was an organizer of the Providence Engineering Society.

LEONARD OUTLET HIRES FOUR SPECIAL SALESMEN

DETROIT—Four special refrigerator salesmen have been added to the staff of Buhl Sons Co., distributor in eastern Michigan and northeastern Ohio for Leonard electric refrigerators, according to W. B. Muse, manager of the electric refrigeration department.

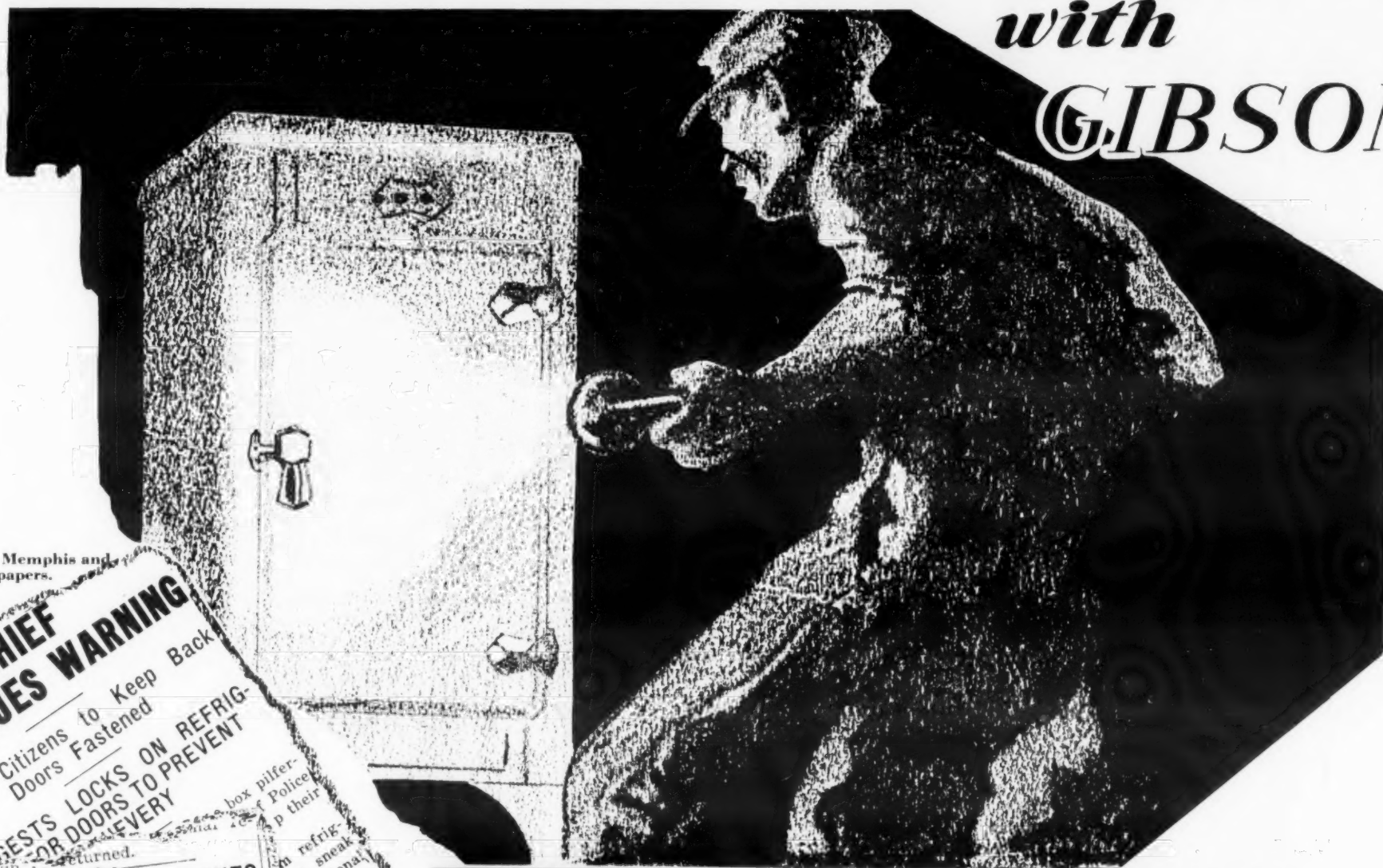
The four men include: K. G. Ritter, A. D. Kelly, R. D. Lombard, and T. H. Skinner. All four have had experience selling refrigerators, having represented such makes as Kelvinator, Norge, Westinghouse and Copeland.

WALL STREET RESTAURANT AIR CONDITIONED

NEW YORK CITY—Barbieri's, restaurant in the Wall St. district, has placed an order with Frigidaire Corp. for a \$10,000 air conditioning installation, according to announcement by J. W. Mersfelder, manager, air conditioning division, New York district.

A SALES FEATURE-EXCLUSIVE

with
GIBSON



News items from Memphis and Chicago papers.

POLICE CHIEF ISSUES WARNING

Advises Citizens to Keep Back
Doors Fastened
SUGGESTS LOCKS ON REFRIG-
ERATOR DOORS TO PREVENT
EVERY

THIEVES PILFER ICE BOXES

Five Homes Entered and Food Taken
From Refrigerators.

Five Memphis housewives had to
prepare additional dinner yesterday
evening after thieves entered their
homes and pilfered ice boxes.

Four of the robberies took place
on L. A. [redacted] and G. K. [redacted]
occupying apartments at
C. [redacted] told police their rear
screen doors were pried open and
milk, bacon and other foods taken.
R. K. [redacted] were
Mrs. [redacted] the other residents of that commun-
ity whose refrigerators were
emptied.

A thief entered Mrs. [redacted]
home at North Evergreen and
took a pound of bacon, a pound of
butter and other foods.
A thief visited W. H. [redacted] late yes-
terday at North [redacted] and



DOOR LOCK AND KEYS

STANDARD EQUIPMENT
ON EVERY GIBSON MODEL

AT NO EXTRA COST

The Gibson door lock is an important
factor in itself—a practical, desirable
convenience and powerful selling feature.
But it's more important because it shows
how thoroughly Gibson anticipates con-
sumer demand and leads the field in
every phase of appeal.

The Gibson Electric is years ahead in
design and performance. Its matchless
beauty, quality, extra conveniences and
MonoUnit power give conclusive proof of
this fact. What Gibson has today others
will have in the future.

Gibson leadership is definitely estab-
lished. Sales are steadily mounting. Why
not have the profit that this line offers?
Gibson profits are permanent! Write for
complete details.

GIBSON ELECTRIC REFRIGERATOR CORPORATION
GREENVILLE, MICHIGAN

EXPORT SALES DEPT.
201 N. Wells St.
Chicago, Ill., U. S. A.
Cable Address:
"GIBSELCO" Chicago
Bentley Code

IN CANADA
TRESTRAIL CORPORATION, Ltd.
255 Spadina Ave. 1100 Craig St.
Toronto East Montreal
Montreal, Quebec



All Gibson Electrics are equipped with door
locks and keys. The locks are completely
hidden in the latch plates. Keyholes are at
the side, out of sight. Design and beauty of
the hardware are unchanged.

To the best of our knowledge Gibson is
the only refrigerator on the market offering
door lock and keys as standard equipment
at no extra cost.

PRICED AS LOW AS

\$149⁵⁰

INSTALLED IN THE HOME

GIBSON Electric

THE MOST Beautiful REFRIGERATOR IN THE WORLD

LEONARD ENLARGES SALES ORGANIZATION

(Continued from Page 1, Column 1)

Power, Inc., Salem, Mass.; Howard H. Amidon, Worcester, Mass.; Home's Music Furnishing, Roslindale, Mass.; Michael C. Leinsing, Jr., Manchester, N. H.; Central Stores, Brockton, Mass.

Newton Auto Sales Co., Inc., Newton, Mass.; Leblanc's Music Store, Salem, Mass.; Henry W. Berry Co., Malden, Mass.; Barry Furniture Co., Cambridge, Mass.; Melrose Hardware Co., Melrose, Mass., and Hillsdale Hardware Co., Medford, Mass.

PORTLAND

PORTLAND, Ore.—Cronin Distributing, Inc., distributor for Leonard refrigerators here, has appointed 23 new dealers in Oregon this spring. They are:

Claude Smith Furniture Co., Forest Grove; Rich's Garage, Beaverton; Wilson Motor Co., Drain; H. S. Harvey Electric Co., Molalla; Hallik Electric Co., Salem; A. B. Bloom Furniture Co., McMinnville; Brown Radio, and Nizic Furniture Co., Portland; G. F. Wright, Woodburn.

Williamette Valley Supply, Salem; Campus Service Station, Corvallis; Lay A. Carlisle, The Dalles; Walter Church, Woodland; William Gadsby & Son, and Vern Z. Winger Co., Portland; George Ammon, Redmond; Rainier Hardware Co., Rainier.

Armitage Drug Co., Vernonia; Sharff & Duver, Paul Schatz Furniture Co., Salmonson Hardware Co., all of Portland, and Mark Smith Electric Stores, Grants Pass.

In addition, the firm has appointed three dealers in Washington: Garden City Furniture Co., Walla Walla; Elec-

tric Shop, Camas; and Wolf Auto Supply Co., Vancouver.

BUFFALO

BUFFALO—Dealer appointments by H. B. Alderman, Inc., Leonard electric refrigerator distributor here, number 27, according to announcement from the company. New dealers appointed in western New York are:

Beach Electric Co., Newark; Floyd T. Field, Savannah; C. B. Gabler Electric Co., Olean; Monroe Electric & Radio Co., Rochester; Brockton Hardware & Lumber Co., Brockton; Ellis N. Weld, Clifton Springs; C. B. Beach & Son, Corfu; Otto G. Maul, Warsaw; Main Sales Co., Buffalo.

S. J. Butler Music House, Buffalo; Otis A. Slatting, Cattaraugus; Harrington Garage, Salamanca; Lewis Music Store, Rochester; Fred W. Hall, Smithport, Pa.; Vogel Hardware Corp., Ebenezer; Anderson Electric Co., Rochester; E. A. McEvers, Gould Brothers, and Max Freedman, all of Buffalo.

Gould Brothers and Highland Radio Sales, both of Niagara Falls; Corner Book Store, Canandaigua; J. Gross & Son, Wayland; Bush Music House, Pen Yan; John S. Powers, Rochester; Spanish Radio Gardens, Corning; and McNall & McNall, Albion.

LOUISVILLE

LOUISVILLE—Smith Radio Corp., distributor for Leonard electric refrigerators here, reports the following new dealers in Kentucky and southern Indiana and Illinois:

Wabash Electric Co., Mt. Carmel, Ill.; Walker Hardware Co., Golconda, Ill.; Gleaves & Sons, Paducah, Ky.; Weigant's Radio Shop, Carmi, Ill.; Harding & Miller Music Co., Princeton, Ind.; Schuttler Music Shop, Evansville, Ind.; Bain Hardware Co., Inc., Lexington,

Ky.; Baugh & Garner Furniture Co., Mt. Sterling, Ky.

Barney Miller, Lexington, Ky.; Winchester Electric Supply Co., Winchester, Ky.; Ruble Doolittle Co., Boonville, Ind.; Irba Mansfield, Spurgeon, Ind.; Blue Diamond Coal Co., Middlesboro, Ky.; Lincoln Lumber Co., Stanford, Ky.; Sturgeon & Gates, Eastwood, Ky.; W. E. Scott, Lexington, Ky.; United Home Furniture Co., branches in Jeffersonville and Scottsburg, Ind., and Lloyd H. Parker Co., Harrisburg, Ill.

GRAND RAPIDS, MICH.

GRAND RAPIDS, Mich.—H. Leonard & Sons, Leonard electric refrigerator distributor, announces the following dealer appointments:

Chaffee Bros. Furniture Co., and Northwestern Bedding Co., both of Grand Rapids, and Otsego Chevrolet Sales, Otsego.

FARGO, N. D.

FARGO, N. D.—Eight new dealers were appointed by Dakota Electric Supply Co., Leonard electric refrigerator distributor here. All but one of these is in North Dakota; the other is in Minnesota.

Minot Electric Shop, Minot; Stone's Music Store, Fargo; Harrison Hardware Store, New England; Wishek Hardware Co., Wishek; Melville Electric Shop, Bismarck; Lake Electric Shop, Devil's Lake; John Muralt, Lisbon; and Giese Hardware Co., East Grand Forks, Minn.

INDIANAPOLIS

INDIANAPOLIS—Capital Paper Co., Indianapolis distributor for Leonard

electric refrigerators, has increased its dealer organization by 20 in the last few months. The new dealers are:

S. L. Ulrich, Tipton; E. A. Hamilton, Williamsport; Tweedy Lumber Co., Carthage; Mast & Ware, Greentown; Davison Battery & Electric Shop; Rochester; Main Radio Shop, Peru; Sanitary Grocery Co., Ossian; Crown City Motor Co., Dunkirk; William Warner & Son, Summitville.

Goldstein Bros. Dept. Store and Fred D. Henry, Indianapolis; Carlisle Furniture Store, Mooresville; Dillard Williams, Burlington; B. & R. Radio Depot, Elwood; W. L. McKee Hardware, Inc., Milroy; Alton Evans, Spiceland; Frank Mauck Lumber Co., Knightstown; Flora Battery Station, Flora; Herbert Smith, Delphi, and Decker Bros. Hardware Co., LaPorte.

JACKSONVILLE, FLA.

JACKSONVILLE, Fla.—Cain Radio Co., Inc., has appointed the following dealers in its territory within the last few months:

Mather Barnes Furniture Co., branches in Daytona Beach and Deland; Service Radio Co., Sarasota; Denmark Furniture Co., St. Augustine; Coconut Grove Tire & Accessory Co., and Flagler Radio Co., both of Miami; J. F. Harris, Wildwood, and R. B. Zachary, Waycross, Fla.

ALBANY, N. Y.

ALBANY, N. Y.—Thirty-six new dealers have been placed on the list of the E. S. & E. Co., Inc., Leonard electric refrigerator distributor here, recently. The names of the new dealers follow:

M. G. Carlisle, Manchester Center, Vt.; John P. Ryan, Troy, N. Y.; Max T. Lansing, South Shodack, N. Y.; F. C. McRae & Co., Schuylerville, N. Y.; Gray's Garage, Spring Glen, N. Y.; Spengler Electric Construction Co., Schenectady, N. Y.; L. M. Auchmoody, Delmar, N. Y.; Hoosick Electric Co., Troy, N. Y.

H. A. Hoffman, Ravena, N. Y.; Charles LaFrano, Walton, N. Y.; William J. Lytle, Greenwich, N. Y.; Carl Co. Schenectady, N. Y.; Charles A. Schrank, Watervliet, N. Y.; Walter C. Sykes, Stephentown, N. Y.; Pine Hills Hardware Co., Albany, N. Y.

A. Cavanaugh, Chatham, N. Y.; Community Appliance Shop and F. W. Newman & Son, Albany; Harold J. Bouck, Cobleskill; Samuel Betor, Broadalbin, N. Y.; Andy's Service Station & Garage, East Durham, N. Y.; Gerald Bryce, Deposit, N. Y.; Canajoharie Electric Supply Co., Canajoharie, N. Y.

Carl Fischer, Millerton, N. Y.; Ralph Riporace, Hoosick Falls, N. Y.; H. S. Braun, Inc., Albany, N. Y.; A. C. Smith & Co., Beacon, N. Y.; Scott's Furniture Store, Whitehall, N. Y.; Schroeder Electric Co., Albany, N. Y.; A. Z. Smith, Cornwallville, N. Y.; H. W. Tubbe, East Durham, N. Y.

Standard Furniture Co., Albany, N. Y.; O'Brien Tire & Battery Station, Troy, N. Y.; Charles H. Phelps, Cairo, N. Y.; J. E. Canfield, Mechanicsville, N. Y.; Island Dock Lumber Co., Kings-ton, N. Y.

BRIDGEPORT, CONN.

BRIDGEPORT, Conn.—The D'Elia Electric Co., Leonard electric refrigera-

tor distributor at Bridgeport, has appointed these dealers recently:

Frank P. McNamara, New Britain; William C. Holroyd Co., Wallingford; Reed Holroyd Co., Meriden; Seymour Furniture Co., Seymour; George T. Bachand, Bristol, and Stuart Crafts, Southington.

DALLAS, TEX.

DALLAS, Tex.—Appointment of 16 new dealers in its Texas territory has been announced by Peaslee-Gaulbert Corp., Leonard distributor with headquarters here. These dealers are:

Karotkin Furniture Co., San Antonio; Leonard Bros., Ft. Worth; Rike's Drug Store, Farmersville; Milan Sales Co., Household Furniture Co., and Peck Furniture Co., all of San Antonio; Hudson Furniture Co., Houston; Allen Furniture Co., Kingsville; Kauffman, Mayers & Co., Galveston.

Victoria Pharmacy, Victoria; Tri-Cities Appliance Co., Goose Creek; Hardware, Furniture & Supply Co., Anderson; Robert Albrecht Radio Shop, Yoakum; Gary-Reed Pharmacy, Gilmer; Home Furniture Co., Temple, and Moore's Pharmacy, Oakwood.

WICHITA, KAN.

WICHITA, Kan.—Stimpson-Philco Co., Leonard distributor here, announces the recent appointment of the following dealers:

McCarthy Hardware Co., Emporia, Kan.; Kay & Kaw Mercantile Co., Newkirk, Okla.; Eckert Hardware Co., Moline, Kan.; Kaw City Radio Co., Kaw City, Okla., and Jay G. Paris Furniture Co., Ponca City, Okla.

MENOMINEE, MICH.

MENOMINEE, Mich.—Northern Hardware & Supply Co., Leonard distributor with headquarters in Menominee, has appointed the following dealers within the last few months:

W. J. Harper, Peshtigo, Wis.; Warner Garage Co., Chassell, Mich.; H. M. Hansen, L'Anse, Mich.; Klinghammers Music Store, Houghton, Mich.; The Willis Hardware Co., Crystal Falls, Mich.

NASHVILLE, TENN.

NASHVILLE, Tenn.—Eight dealers for Leonard electric refrigerators have been appointed recently by McWhorter, Weaver & Co., distributor in Nashville. The new dealers are:

P. Lester, Woodbury; Brown's Furniture Store, Dickson; L. C. Tiller, Nashville; E. E. Chapman, Pulaski; Haynes Hardware Co., Murfreesboro; Hillis Hardware Co., McMinnville; Winchester Furniture Co., Winchester; Haynes Garage, Shelbyville.

DETROIT

DETROIT—Buhl Sons Co., Leonard electric refrigerator distributor, has made 12 dealer appointments this spring, according to announcement from the company. They are:

M. L. DeLano Hardware Co., Orton-
(Continued on Page 6, Column 1)



"TO SELL ME, SHOW ME
SOMETHING NEW AND BETTER"

— THE CUSTOMER'S
CONSTANT CHALLENGE
TO RETAILERS.

Newness never loses its appeal. New styles, new improvements and new conveniences are the factors that keep merchandise moving—that create desire of ownership and actual sales.

Toast King
TOAST FIT FOR A KING
MEETS THIS CHALLENGE!

The Toast King is more than just an automatic toaster. It's a *super automatic*— unquestionably the most advanced toaster on the market. More conveniences, more sales features, more economy and quality! Yet it sells for less.

Toasts two slices of bread, both sides at once. Pilot light signals when toast is done. Current is automatically reduced—bread cannot toast any longer but will continue to *keep hot* until wanted. Makes dark, medium or light toast. Trouble-proof and fully guaranteed.

Complete merchandising and sales plans extended to all dealers. Nationally advertised. Get the facts. Mail the coupon for complete details. There's a royal profit in every sale!

DOUBLE ACTION
MANUFACTURING CORPORATION
GRAND RAPIDS, MICHIGAN
PIONEERS IN THE ELECTRIC TOASTER FIELD

MAIL THIS COUPON
Double Action Manufacturing Corporation,
Grand Rapids, Michigan.
Without obligation, please send complete details
regarding the Toast King.
☐ Distributor Franchise
☐ Preferred Dealer Franchise
Name _____
Address _____
City _____ State _____



The MULLINS
SHEET METAL
EVAPORATOR

Sanitary
Compact
Efficient

White
Porcelain
Enamel

DESIGNS FOR USE WITH HIGH SIDE AND LOW
SIDE FLOATS—IMPROVED FAST FREEZING
SHELF AT SLIGHTLY INCREASED COST.

Manufacturers: Write for Details!

MULLINS MANUFACTURING CORPORATION
REFRIGERATION DIVISION
SALEM, OHIO

Interest "compounded" daily

If you want to know what Frigidaire prestige and performance mean, ask any long-established Frigidaire Dealer. He will tell you the greatest selling force behind Frigidaire is the *enthusiasm* of its users; that almost every purchaser soon has three or four of her friends interested in Frigidaire.

It's this cumulative good will—this fast-spreading interest aroused by every sale—that makes the Frigidaire Franchise so valuable. And every sale means a fair, wholesome profit for the dealer—as

well as a lead to additional business.

Frigidaire means larger volume, more profits for you

Even 1932 is a good year for aggressive dealers. During the first quarter many Frigidaire dealers reported sales increases of 35 to 53% over the same period last year. New low prices and even greater values are stimulating sales right along. And the recently perfected Air Conditioning

equipment for homes, offices and commercial use is opening up new opportunities for profit.

Now is the time to go with the leader. Mail the coupon for information regarding the Frigidaire Franchise—or wire today. Franchise Division, Frigidaire Corporation, Subsidiary of General Motors Corporation, Dayton, Ohio.



FRIGIDAIRE

The General Motors Value in the Refrigeration Industry

MAIL THIS COUPON FOR FRANCHISE FACTS

FRIGIDAIRE CORPORATION, Franchise Division, Dept. M-211, Dayton, Ohio
Gentlemen: Please send me the facts about the Frigidaire Franchise.

Name.....

Business.....Address.....

City.....State.....

LEONARD ENLARGES SALES ORGANIZATION

(Continued from Page 4, Column 5)

ville; Schutt Furniture Store, Mt. Clemens; Campbell-Penfield, Inc., Detroit; William M. Spencer & Son, Armada; Medler Electric Co., Alma; Central Music Co., Detroit; Huston & Co., Plymouth; Herman Bock, Detroit.

Ed Fechter, Frankenmuth; Denzier Bros., Detroit; Swingle Chevrolet Co., Fenton, and Krzyske Bros., Waltz.

BURLINGTON, VT.

BURLINGTON, Vt.—Vermont Hardware Co. has appointed new dealers this spring to increase its distribution

of Leonard electric refrigerators. The new dealers are:

Lewis Bros., Lebanon, N. H.; Wellwood Furniture Co., Springfield, Vt.; C. W. Schoolcraft, West Lebanon, N. H.; A. C. Healy, Horwood, N. Y.; Allen & Underhill, Chelsea, Vt.; Alfred Gardner, Plymouth, N. H.; Sperling's Furniture Co., Ogdensburg, N. Y.; C. F. Thurber, Fairlee, Vt.; W. C. Kimball, Panton, Vt.; H. A. Seaver, Williamstown, Vt.; E. D. Jackson, Hartland, Vt.; L. L. Worthley, E. Corinth, Vt., and Vermont Music Co., Barre, Vt.

MILWAUKEE

MILWAUKEE—Twenty new dealers have been added to the organization of J. J. Dougherty, Inc., Leonard distributor at Milwaukee, during the spring months. These new dealers are:

Werve Furniture Co., Kenosha; Erick-

son Marx Music Co., La Crosse; Blow & Mielka, Waupun; F. W. Severance, Milton; Lacy & Clancy, East Troy; Charles H. Wieland, Berlin; H. J. Thiede, Fond du Lac; Prais Furniture & Undertaking Co., Stevens Point; McCowan Music & Sales Co., Sheboygan; Reinhold Bros. Co., Milwaukee; Schneider Hardware Co., Beloit.

Seidel Bros., Milwaukee; Mitterreiter Paint & Radio Store, Tomah; A. H. Marx, Cashton; Neillville Tire Shop, Neillville; Otto A. Bade, Lake Mills; Gasser Bros., Boscobel; Gust E. Rendell, Elkhorn; H. L. Karlen & Sons, Monticello.

PHILADELPHIA

PHILADELPHIA—The dealer organization of the Klein Stove Co., Leonard electric refrigerator distributor in the Philadelphia territory, has been increased by more than 50 names this spring. New dealers are:

Lefevre Bros., Boyertown, Pa.; William J. Horne, Pennsburg, Pa.; Christman & Jarrett, Quakertown, Pa.; R. J. Balliet, Statesdale, Pa.; William J. Kauffman, West Chester, Pa.; Bernard Blumenthal, Philadelphia; Strand Music Shop, Philadelphia; City Philco Radio Co., Hazelton, Pa.

Sanitation Systems, Inc., Harrisburg, Pa.; Ted Lenore, Vineland, N. J.; Paulsboro Home Supply, Paulsboro, N. J.; George's, Camden, N. J.; F. E. Brown, Lester, Pa.; Live Wire Electric Co., Gettysburg, Pa.; Beinstein & Co., Inc., Northeast Radio Co., McGinnity-Murtas, Nathan Birdman, John A. Moore's Sons, Kahn & Rosenau, all of Philadelphia.

M. Chartok, Coatesville, Pa.; Ogden Howard Furniture Co., Wilmington, Del.; Myers Motor Co., Norristown, Pa.; P. H. Van Devender, Selinsgrove, Pa.; W. M. Steenbergen, Danville, Pa.; S. B. Spiegle, Woodbury, N. J.; Reinhard & Shey, Lebanon; George A. Schwartz,

Leighton, Pa.; F. Rapport, Pleasantville, N. J.

J. Wilson Barts & Sons, Pine Grove, Pa.; North Sales Co., Hazelton, Pa.; Duncan Brothers, Pocomoke City, Md.; Tremont Hardware Co., Tremont, Pa.; A. Stewart Congdon, Sayre, Pa.; William Jacobs, Royersford, Pa.; W. B. Vallish, Mt. Carmel, Pa.; Wright Motor Sales, Hazelton, Pa.

George W. Brelsford, South Langhorne, Pa.; Hayden Garage, Susquehanna, Pa.; A. C. Miller, Stroudsburg, Pa.; Coleman & Sons, Bethlehem, Pa.; Servu Appliance Co., High Bridge, N. J.; Spencer & Son, Bristol, Pa.; Miers Radio Shop, Phillipsburg, N. J.

Pennsylvania Furniture Co., James Devita & Son, Brown's Music Shop, L. J. Erdman, East Frankford Furniture Co., Germantown Refrigeration Service, all of Philadelphia.

PROVIDENCE, R. I.

PROVIDENCE, R. I.—Ballou, Johnson & Nichols Co., Leonard distributor, has made the following dealer appointments recently:

A. E. Richard, Oakland Beach, N. Y.; Otto M. Findler, Webster, Mass.; A. D. Duffresne, Groton, Conn.; Hyannis Hardware Co., Hyannis, Mass.; Modern Furniture Co., Fall River, Mass.; J. O. San Souci Co., and Joseph Marcus & Co., both of Providence; N. P. Tessier, Fall River, Mass.

SEATTLE

SEATTLE—North Coast Electric Co. has appointed eight new dealers in its territory in the state of Washington. These dealers are:

N. T. Clowers, Tenino; The Fisher Co., Tacoma; Puyallup Furniture Co., Puyallup; Goldberg Furniture Co., Aberdeen; Connor's Electric Shop, Tacoma; C. C. Miller, Tacoma; Gesler-McNiven Co., Centralia; and Neil & Hume, Snohomish.

SAN DIEGO, CALIF.

SAN DIEGO, Calif.—Electric Supplies Distributing Co. has named the following firms as dealers for Leonard electric refrigerators, within the spring months.

LaJolla Radio Shop, LaJolla; San Diego Hardware Co., San Diego; C. L. Bice, Vista; Dietrich's Electric Shop, Escondido; and People's Furniture Store, San Diego.

CLEVELAND

CLEVELAND—The appointment of 20 new dealers to handle Leonard electric refrigerators in Ohio has been made recently by B. W. Smith, Inc., distributor here.

The new dealers include: Hot & Kold, Lakewood; Water Haffey, Cleveland; Euclid Chardon Radio, Euclid; Aungst Brothers, Mansfield; Burr & Smith, Chardon; Lewis & Greenbo, North Canton; Rudolph Wurlitzer Co. and People's Furniture Co., both in Youngstown.

Creston Motor Car Co., Creston; G. T. Sedgeman, Oberlin; Tran Stove & Repair Co., Cleveland; C. W. Schug, Bellevue; J. W. Horn & Sons, Lakeville; F. J. Vynhel Furniture Co., I. T. Moyer Electric Co., and Rudolph Wurlitzer Co., all of Cleveland.

The Sanford Co., Wooster; Wilkinson Radio & Electric Co., Kent; Bigelow Motor Co., Peninsula, and Conrad Hinrich, Dover.

OMAHA

OMAHA—New dealer appointments numbering 13 have been made this spring by the Auto Equipment Co., Leonard distributor here. The new dealers are:

Nelson Hardware Co., Madison; D. R. Martin & Son, Geneva; S. S. T. Garage, Ft. Calhoun; Hardy Furniture Co., Lincoln; J. D. Crist, Merna; Nelson Elec-

tric Co., Omaha; Paige Battery & Electric Shop, Wisner; Norman A. Forbes, Stanton; E. C. Carothers, Broken Bow; Ruby Radio & Electric Shop, Shenandoah, Iowa; Monahan Electric Shop, Neola, Iowa; Fitzsimmons Furniture Co., Oxford; and Hahler Buick Co., North Platte. All these cities except Shenandoah and Neola are in Nebraska.

CHICAGO

CHICAGO—Ten new Leonard dealers in the Chicago area have been recently appointed by L. C. Wiswell Co., distributor in metropolitan Chicago. They are:

W. J. Roy, Kankakee; Ohla Motor Co., Joliet; Joseph A. Thurman, Chicago; Patterson Bros., Evanston; Nichols Radio Co., St. Charles; Hebel Battery & Electric Shop, LaSalle; Siegel & Berg, Charles T. Minter Co., and S. Salem, all of Chicago.

SAN FRANCISCO

SAN FRANCISCO—New dealers for Leonard refrigerators recently appointed by the Chanslor & Lyon Stores, Inc., Leonard distributor here, are as follows:

E. T. Bruce, Coalinga; North Bay Electric Works, branches at Mill Valley and San Rafael; C. C. Wooley, Sultana; Hale Bros. Stores, Inc., Sacramento; C. W. Sitton, Richvale; H. T. Miller, Roseville; Radio Electric Co., San Francisco; French Furniture Co., Fresno; George N. Walsh, Bakersfield; Scott-Buttner Co., Oakland.

SALINA, KAN.

SALINA, Kan.—E. C. McKelvey Radio Co., Leonard distributor here, announces the following new dealer appointments in its Kansas territory:

Quinter Furniture Co., Quinter; Green Electric Co., McPherson; L. A. Holloway, Little River; Si Young Hardware & Tin Shop, Hutchinson; Bissinger Electric Shop, Hays; Harrie's Garage, Wakeeney; The Funk Furniture Co., Great Bend; and Stephens Confectionery, McCracken.

WASHINGTON, D. C.

WASHINGTON, D. C. — Southern Wholesalers, Inc., Leonard distributor in the District of Columbia and surrounding territory, has appointed 17 new dealers during the spring months. These are:

C. H. Feete & Sons, Brunswick, Md.; Davis Supply Co., Elkton, Md.; A. F. Campbell, branches in Potomac, Va., and Washington, D. C.; Charles Swartz & Son, The Heckinger Co., Harry Kaufman, Colony Radio Co., George's Radio Co., all of Washington, D. C.; L. W. White, Norbeck, Md.

David Horner, Hagertown, Md.; C. H. Feete & Sons, Brunswick, Md.; B. S. Dorsey Co., Mount Airy, Md.; Laynor Co., Elkridge, Md.; M. Shavitz & Sons, Moses Kahn & Sons, The Shevitz Co., all of Baltimore.

SHREVEPORT, LA.

SHREVEPORT, La.—Interstate Electric Co., Leonard distributor in Shreveport and vicinity, announces the following recent dealer appointments:

Gary-Reed Pharmacy, Gilmer, Tex.; W. M. Day Drug Co., Gladwater, Tex.; E. R. Kiper Co., Monroe, La.; Electric Specialty Co., Shreveport, La.; W. L. Jones Electric Co., Lufkin, Tex.

ST. LOUIS

ST. LOUIS—New dealer appointments of the Aeolian Co. of Missouri, Leonard distributor in St. Louis, number 13. The new dealers are:

O. J. Tharp, Kampsville, Ill.; Hiken Furniture Co., Belleville, Ill.; F. H. Heiligstag, Antonio, Mo.; J. S. Lamb

(Concluded on Page 14, Column 2)

BUSH REFRIGERATION CONDENSERS

For small or large compressors standard sizes or to specifications. A folder of 18 standard condenser blue prints is now ready for mailing.

THE BUSH MFG. CO., HARTFORD, CONN.

Inexpensive SUMMER COOLING for customers . . . increased SUMMER SALES for you ~

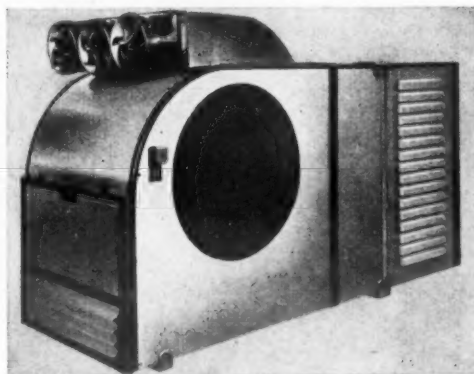
WITH the blazing summer sun now making shopping a hot, uncomfortable task, the store that can offer customers a cool, comfortable shopping place will get the lion's share of summer business. People will come oftener, stay longer and buy more.

With Airtrol, the complete air conditioning equipment, you can offer any store or business building in your locality this profitable summer cooling at a price that even the smallest shop can pay. When installed with a specially designed water cooler and any commercial refrigerating unit of proper capacity, Airtrol will cool and de-humidify the air to a point well within the comfort zone.

When you sell Airtrol summer cooling, you are also selling all year 'round comfort. For in winter and summer Airtrol supplies fresh, cleaned air, freely circulated, comfortably heated or cooled, and correctly humidified or de-humidified.

It is small, compact, largely self-contained and can be installed quickly, easily and inexpensively. Its lower price, made possible by new features of design and construction, gives you an excellent margin of profit.

There is no longer any doubt that air conditioning offers you the greatest opportunity for profit of any business developed within the last ten years. Take advantage of this great and growing market. Write today for full details of Airtrol and of the complete Airtrol selling plan that has been created to help you sell more Airtrols, more quickly and more



AIRTROL MODEL B CABINET TYPE

Airtrols, ranging in capacity from 18,000 cubic feet to 125,000 cubic feet, are available to suit every need from private homes to the large industrial plant; for retail stores and business places of almost any size or type; restaurants, auditoriums, schools—any place where people gather; beauty parlors and barber shops; offices, homes—in kitchens and other rooms. Where the capacity of a single Airtrol cabinet is insufficient, a battery of two or more Airtrols may be used to circulate the necessary amount of pure air, heated or cooled and correctly humidified or de-humidified.

profitably. J. H. McCormick & Co. Works: Williamsport, Pa. General Sales Office: Chrysler Bldg., at 42nd St. and Lexington Ave., New York. Canadian Sales Representative: A. H. Simpson, 28 Scott Street, Toronto, Canada.

A I R T R O L

Ansul Sulphur Dioxide UNIFORM ALWAYS For direct charging—

Pure, bone dry. Every container analyzed. A perfect product guaranteed.



Nine sizes of cylinders from 2 to 150 pounds. Also ton drums. Stocks in principle cities.

ANSUL CHEMICAL COMPANY
MARINETTE • WISCONSIN



DISTRIBUTOR ADDS 3 TO HOTPOINT STAFF

WATERBURY, Conn.—Three new Hotpoint range men have been added to the personnel of Modern Home Utilities, Inc., distributor of General Electric refrigerators and Hotpoint ranges. They are, John T. Mulcahy, supervisor; David B. Kilgore, and Robert Goodenough.

Electric cookery schools have been held throughout the territory of Modern Home Utilities, Inc., this spring, under the leadership of Hazel M. Fletcher, home economist for the distributor.

Torrington Home Utilities, dealer in Torrington, held a cooking school in Morrison Hall, under the direction of E. B. Phillips, manager. Promotion of the cooking school was made through newspapers, direct mail, personal invitations, and telephone calls.

Almost 400 women attended the school conducted by Frank A. Mann, dealer in Rockville, Conn.

Two Hotpoint range and refrigerator cooking schools have been held recently in the institute room of Modern Home Utilities, Inc. Salesmen provided a list of prospects to whom they wished to have invitations sent. No public newspaper advertising was used, and the "hot prospects" alone attended. The institute room, which holds 100 persons, was filled to capacity at both schools, according to L. L. Stacy, manager of advertising and sales promotion.

FRIGIDAIRE TELLS USES OF WATER COOLERS IN HOTELS

DAYTON—Use of Frigidaire water coolers in building business for hotels is the subject of a mailing piece which has just been made available to commercial outlets.

Particularly emphasized is the "roll-around" feature of Frigidaire water coolers, which are equipped with rubber-cushioned wheels that they may be moved from room to room.

The uses of the cooler pictured and described in the booklet include: in private dining rooms for luncheon club meetings, in order that the business session of the meeting can go uninterrupted by hotel attendants; in the ballroom, where dancers will appreciate a drink of cool water; in sample rooms, for the convenience of hotel guests and visitors to the sample rooms.

The facsimile of a letter from Sylvester Beer, managing director of the Hotel Van Cleve, Dayton, is shown in the folder.

GIBSON APARTMENT SALES FIRM FORMED IN DETROIT

DETROIT—A new firm, Gibson Refrigerator Sales Co., has been organized with headquarters at 5075 Grand River, to handle all Gibson apartment house sales in metropolitan Detroit.

C. W. Waddell is president of the new firm, which was formerly the Waddell Co., manufacturer's representative for various stoves. Gibson ice refrigerators have been handled by the firm previous to its new connection. This is the first time it has entered into the electric refrigeration field.

Sales meetings for a new outside force of salesmen will be conducted this week by Harry Lee, of Morley Bros., Gibson distributor here.

OHIO RESTAURATEURS HEAR AIR CONDITIONING TALK

AKRON, Ohio—Members of the Ohio State Restaurant Association heard a description of air conditioning at their annual convention here when Frank C. Lyons, air conditioning division, Frigidaire Corp., Dayton, explained how profits can be increased by pleasant indoor weather.

A sound motion picture of typical restaurant air conditioning installations illustrated Mr. Lyons' talk.

Mr. Lyons outlined the salient features of restaurant air conditioning brought out in a research program by Frigidaire engineers.

WESTINGHOUSE EXECUTIVE TO STUDY CREDIT AID

MIDDLETOWN, Ohio—E. T. Weir, chairman of National Steel Corp., Pittsburgh; George M. Verity, chairman of American Rolling Mill Co., Middletown; and A. W. Robertson, chairman, Westinghouse Electric & Mfg. Co., East Pittsburgh, have been appointed members of a committee in the Fourth Federal Reserve district to aid in the extension of Federal Reserve credit.

COPELAND DEALER NAMED

ALBANY, N. Y.—McClure & Dorwald has been named Copeland dealer by the Albany Distributing Corp., Copeland distributor in Albany.

Does YOUR CABINET belong in this store?

Let CORKBOARD INSULATION help get it there



McCRAY CABINET

McCray offers thorough protection for food in this new display case. It combines all the engineering knowledge of McCray's 42 years of manufacturing plus the life-long efficiency and economy of operation offered by Armstrong's LK Corkboard Insulation. Made by McCray Refrigerator Sales Corporation, of Kendallville, Indiana, it is only one of the complete line of McCray commercial refrigerators.

WHAT gives your cabinet the edge over competitors'? It's service . . . the long years of efficient, economical operation to which your customer looks forward—good insulation will help win sales.

If you can tell customers your cabinets are insulated with Armstrong's LK Corkboard, you've taken a long step toward securing their order! Buyers of refrigerated equipment know that Armstrong's Corkboard has been standard insulation in the ice and food storage industry for thirty years. Armstrong's new LK Corkboard provides higher efficiency and lighter weight plus all the other physical characteristics which make corkboard the standard insulation.

Give your cabinets the prestige of Armstrong insulation. Let us tell you about the large new sizes of LK Corkboard, which cut production costs. Armstrong Cork & Insulation Company, 917 Concord Street, Lancaster, Pennsylvania.



Armstrong's LK Corkboard Insulation
Efficient, Durable Insulation for Refrigerated Equipment

ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Refrigeration Industry

Published Every Week by

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Editorial Aims of the News

To encourage the development of the art.

To promote ethical practices in the business.

To foster friendly relations throughout the industry.

To provide a clearing house for new methods and ideas.

To broadcast the technical, commercial and personal news of the field.

Will the Bureau Live?

WILL the Electric Refrigeration Bureau last out the year? And if it does, will it fold up at the end of 1932, and join the ranks of things past and forgotten?

Answers to these questions are worrying Bureau leaders just now. The questions themselves are being raised by executives and junior executives of manufacturers supporting the Bureau program, and are being discussed whenever officials of this classification get together.

Already the Bureau program has been curtailed. Appropriations for national cooperative advertising, for issuing the Bureau house organ, and for other Bureau activities have been sliced materially. And there is a bare possibility that further cuts may be expected before the year is over.

Economy Seems Necessary

The obvious reason for this crippling of the Bureau and its work is economy. Cooperative endeavor which costs hundreds of thousands of dollars is a luxury which manufacturers of electric refrigerators—battling against record low prices quoted on new makes, and striving to penetrate a market composed largely of small-income groups—feel that they cannot afford at the present time.

Reasoning further, some manufacturers believe that it is no longer necessary to spend vast sums just to promote the idea of electric refrigeration. Public acceptance of electric refrigeration, they argue, is rather well established today.

Pioneer manufacturing organizations, which have poured money into advertising and promotional channels over a period of years, now survey the results of their handiwork and note the large number of competitors which are springing up to chisel into the market the pioneers have been largely responsible in creating. And such observations are likely to lead them to the conclusion that it would be wiser to sail their own boat than to spend more time and money improving the harbor so that everyone can get in and clutter up the water.

Helping 'Fly-by-Nights'

One executive of a leading manufacturer puts it something like this:

"Why should the major concerns appropriate a lot of money to build a larger market for 'electric refrigeration,' when any fly-by-night with an idle factory, a smart purchasing agent, and small sales expense can put out an electric refrigerator at a ridiculously low price and cash in on the good will and acceptance we have built?"

"According to our field men, these newcomers are getting a noticeable share of the business. They spend no money for national advertising. We spend it for them."

"It would be much smarter if the leading manufacturers would band together in a cooperative advertising program to sell *quality* refrigeration. Such a campaign should emphasize the fact that blind following of those magic words, 'electric refrigeration,' will not guarantee the purchaser satisfactory food preservation."

"There are electric refrigerators and electric refrigerators, and any cooperative campaign supported by a few manufacturers only should recognize that fact and make it clear in its advertising copy."

Valuable Organization

Not without regrets, however, can the Bureau be abandoned. Undoubtedly it has had considerable influence in scattered localities, and has, by its concerted promotional activities and the *esprit de corps* it has fostered in these communities, helped push sales of electric refrigerators.

Moreover, it would seem unfortunate if the industry finds it expedient to junk the national organization which the Bureau has built up so slowly and with such effort. Bureau officers feel that they are just now getting set to "go somewhere," and that it would be a shame to scrap an organization when it is on the verge of maturity, when it has begun to develop a procedure and a technique, and when it is getting on a systematic and efficient basis.

It would seem unfortunate, too, if the industry were to lose the services of men like James E. Davidson, president of the Nebraska Power Co. Mr. Davidson's enthusiasm for his task as chairman of the Electric Refrigeration Bureau seems to know no bounds. Without any remuneration whatsoever and handicapped with a program which was puzzling and difficult to sell to many types of dealers, he has wrestled valiantly with all the problems of starting a new activity, and against inertia and apathy.

In addition to Mr. Davidson, there are men like Charles Michel of St. Louis and L. L. Edgar of Boston—public utilities executives who have effectively devoted a considerable portion of their time to pushing local Bureau activities—whose services the industry would miss. Some 400 communities now have local Electric Refrigeration Bureaus, which might lose continuity and even their existence should the national program be abandoned.

Important to Utilities

Since one of the chief results of the Bureau operation has been the establishment of more harmonious relations between dealers and public utilities, it might seem that the utilities themselves would be interested enough in the Bureau to keep it from dying.

It has been freely said that had the Electric Refrigeration Bureau been functioning in 1930 and the forepart of 1931, the widespread agitation against public utility merchandising which occurred in the spring of 1931, and which resulted in prohibitory legislation in Oklahoma and Kansas, might not have been nearly so serious.

This year, although there have been undercurrents of such agitation, it has not risen to the surface and broken out. Friends of the Bureau think that the relations it has sponsored have been materially responsible for this subsiding of feeling against the selling of appliances by central stations.

Inasmuch as good will is the one thing public utilities seem to want—and need—most badly, one could hazard that they might find ways and means of financing a project which seems to have saved them from more attacks upon a vital part of their structure.

It would seem, moreover, that they should be especially interested in helping maintain an organization which not only builds and protects good will, but which builds loads in addition.

From the standpoint of the manufacturers who have been supporting the national program, the Electric Refrigeration Bureau appears to be out of adjustment with the present situation in the industry, now that dog-eat-dog competitive activity is more than ever in the ascendancy, and it's "fight or die."

From the standpoint of public utilities, however, the Bureau program holds forth a great many possibilities which will bear thorough investigation and careful consideration.

McCarter Reviews Life, Career of Edison In Memorial Address

By Thomas N. McCarter*

President, Public Service Corp. of New Jersey, Newark, N. J.

THOMAS EDISON was born in Milan, Ohio, in the year 1847, of reasonably well-to-do parents, and of excellent family connections. In his early life his parents moved from Ohio to Port Huron, Mich., where the bulk of his boyhood was spent. He had very little school education in the ordinary sense.

His total attendance at school is said to have been limited to about a three-months' period. The balance of his teaching was supplied by his mother. He was not generally regarded as bright. On the contrary, he was thought by many to be mentally dull.

Full of Restless Activity

He was, however, full of restless activity. He early became a newsboy selling papers and afterward candy, and perhaps other delicacies, on a train running between Port Huron and Detroit. A little later, as auxiliary to this work on the train, he published a small newspaper of his own, of which he was the reporter, editor, composer, printer and distributor.

During the period of the Civil War his attention was attracted to telegraphy then for the first time really assuming a position of great importance in the transmission and distribution of news. He became a telegrapher and was employed as such in various places in the Middle West at relatively small compensation.

Telegraphic Inventions

He was a good deal of a wanderer, migrating from place to place in the prosecution of his new art, eventually going to Boston. It was while he was thus engaged as a telegrapher that the seeds of his inventive genius began to manifest themselves—culminating in his invention of the so-called automatic, duplex and quadruplex system of telegraphy, which enlarged the scope of this industry from the restricted basis upon which it was first carried on into its great practical utility of the present, by making it possible to send various messages over the same wire at the same time.

One of his first inventions was the stock ticker or improvements to the theretofore clumsy contrivances of this character which had existed.

This he ultimately sold to the Western Union Telegraph Co. for \$40,000, which furnished him the capital with which to begin operations in a serious way. At this time he definitely decided to embark upon a career of invention. He rented a shop in Newark and started in his marvelous career. Time will only permit us to sketch in outline the rapid succession of events.

Develops Typewriter

The genesis of the typewriter had been invented by a gentleman named Sholes from Wisconsin. It was crude and was put into Mr. Edison's hands for perfection. The commercial typewriter afterward known as the "Remington" evolved itself from his efforts.

In 1875 and 1876, Alexander Graham Bell brought out the principle of the telephone and obtained a patent therefor. This too was so crude as to be lacking in the elements of commercial success until Mr. Edison invented the carbon transmitter which has since been universally used, and for which he received what for those days was a very handsome sum of money.

In 1876 Mr. Edison moved because of some local dissatisfaction with his landlord in Newark, to Menlo Park—where he remained for 10 years. And here it was, supplemented by further activities in New York City, that his great work for the electrical industry originated and was carried out to its great conclusion.

Incandescent Lamp

The principle of electricity generated from a battery had, of course, been known for many years. The original crude open-flame arc lamps, with their hissing sounds, surrounded by myriads of bugs, had come into use. But the principle of the incandescent lamp as a practical commercial proposition was entirely unknown and believed to be incapable of solution until developed and brought to a commercial practicability in 1879.

He was not the first man to make an incandescent lamp, as the principle had been established and demonstrated by several experimenters. What he did was to invent a lamp with a carbon filament, enclosed in a glass globe, in which he created a vacuum. It was the first practical incandescent lamp. Gas illumination had long been in use, sharing the field of illumination with the wax candle and the Argand lamp burner, but with the development and perfection of the incandescent lamp came the beginnings of the great industry to which so many of us are devoting our lives.

The passing reference that I can make to this subject can give no adequate ac-

*Memorial address before the third general session of the 55th convention of the National Electric Light Association, June 9, 1932.

count of the labor, time, money and detail involved in the solution of this problem. It included, among other things, the sending of emissaries to all the remote corners of the earth in the hunt for bamboo of a proper texture or other similar material which Mr. Edison then believed would be the best filament, but finally he adopted carbon as the most practical substance.

Success finally crowned his efforts, but this was only the beginning. The next step was to devise a complete system of lighting which he clearly saw was an absolute essential if the lamp was to have its opportunity. He early foresaw the general introduction of electricity into the building and homes of the people and determined that generation from a battery would not meet the demand.

First Central Station

From the first he believed in the principle of the central station and there followed in rapid succession the dynamo and the Pearl St. Generating Station in New York—the first central station in this country.

By this time he had attracted the attention of the leaders of finance of the country; the scientists of the world, and through exhibitions and expositions the gaze of a world-wide public was being riveted upon him. What mighty oaks have come from these acorn seeds. Approximately 20,000,000 homes in the United States are using incandescent lamps and the public utility companies furnishing energy for power and light have a capitalization in excess of \$10,000,000,000.

Phonograph Introduced

Soon there appeared the phonograph which for the first time in human history made it possible to record and reproduce the human voice in speech or in music. Then if he did not invent, he certainly improved to a practical and commercial standpoint whatever then existed of the motion picture process until that art has developed into the great industry that it now is.

He also took hold of the electric railway principle, which perhaps had been originated by others, and built at Menlo Park what is said to have been the first stretch of electric railroad in this country. People from all over the world migrated to Menlo Park to see all the phenomena of which I have been speaking.

Later on he turned his attention to ore concentrate, to the building of cement houses, and to the development of the storage battery. It is probably true that these three activities were not as successful commercially or practically as his other great inventions. Nevertheless it is now said to be true that one-half the Portland cement produced in this country is made in kilns of the Edison type.

Capacity for Work

What a vast series of achievements to have been developed by the inventive genius and leadership of one man during the span of his active life. Of course he had assistants in these various matters, and surrounded himself with a body of loyal workers and followers, all of whom were proud to be known as Mr. Edison's boys or his pioneers.

His capacity for work was almost unbelievable, frequently lasting for 20 hours of a 24-hour day without cessation. During periods of extreme activity sleep would be lost sight of except for an occasional interruption of an hour or so. He firmly believed that all men sleep too much. Night would be turned into day in his laboratory, with no intermission except for a little supper that he would have sent in about midnight.

Moves to West Orange

In 1886 he moved his laboratory and residence from Menlo Park to West Orange. Here he acquired a delightful home in the residential precincts of Llewellyn Park where he lived surrounded by a most devoted family circle until his death; and adjacent thereto he built up the magnificent set of buildings that constituted the workshop of most of his activities at the time of his death.

Simple in his tastes, frugal in his habits, he pursued the even tenor of his way from the start of life which I have attempted to describe to become the world's greatest inventor. The number of patents taken out by him during the period of his career run into the thousands, and cover almost every conceivable line of scientific activity.

When the great war came on his services were requisitioned by the United States government, and for nearly two years he gave them freely to his country, dropping all his own work in the meantime. Among the notable achievements of his war service is his development of sound detectors by which the approach of torpedoes could be heard and anticipated. When the war was over, back to his work he went and

(Concluded on Page 9, Column 3)

What Homemakers Learned About Purchasing Household Goods

Reprinted from *Journal of Home Economics*, June, 1932

"In the case of a refrigerator, it was discovered that the prospective buyer must still take the manufacturer's word that it is well insulated, because the salesman and the local dealer know very little about it. It was learned that a

number of interested national associations had combined their efforts in standardizing and labeling refrigerators, but as far as we could learn the recommended specifications have not been accepted by the manufacturers."

FOR the past two years the homemakers section in the District of Columbia Home Economics Association has attempted to help solve the purchasing problems of its members. As is well known, the present status of the woman in charge of a household is not so much that of a producer as that of a buyer, and it is therefore imperative for her to become an intelligent one.

Our method was this: If Mrs. A was in need of a new blanket, she or another member proceeded to gather information regarding blankets and then reported the findings to the group for discussion and deliberation. The sources from which the information for a specific commodity was sought were generally one or more of the following: clerks and buyers in the local stores; manufacturers; research agencies, both private and governmental; testing institutes maintained by magazines.

Set Up Standards

In addition to gathering information, the group attempted to set up for each kind of article a standard or a set of desirable qualities pertaining to performance, construction, and expected length of service of the article. Among the articles studied were blankets, sheets, pillows, mattresses, refrigerators, rugs and kitchen utensils; at the last monthly meeting foods were under consideration. It is almost needless to say that for each commodity thus investigated plenty of literature was received but little useful information.

In the case of sheets, it was found that the clerks at the local stores could give little or no information regarding tensile strength and thread count of the fabric used; many lengths and widths were found on the counters, instead of three widths for single, three-quarter, and double beds and one length of 108 inches; and price was by no means a guide to wise buying of sheets. Letters were written to the manufacturers asking for data on thread count and tensile strength; the replies may be roughly divided into four types:

1. Complete evasion of the question asked.
2. Assurance that any article sold under the manufacturer's trademark would give complete satisfaction.
3. Assurance that the sheet had been laboratory tested but that information could not be given.
4. One respectful reply giving laboratory data.

Wary of Trade-Marks

As a result of these replies, the women have become wary of trade-marks. They also felt that any manufacturer who had helpful laboratory data and refused to give them on request was a hindrance to wise buying and should be avoided.

In the case of part-wool blankets, no information was obtainable regarding the percentage of wool and cotton contained. Furthermore, when a blanket of known quality and an inferior one were brought to a meeting, no one in the group was able to judge between them.

In studying mattresses, it was discovered that the inner cotton padding between the lovely covers may be of the poorest quality, even when it is new and unused. The group visited a local mattress plant to get some idea of what to expect to find inside of what is considered a good mattress.

Refrigerator Information

In the case of a refrigerator, it was discovered that the prospective buyer must still take the manufacturer's word that it is well insulated, because the salesman and the local dealer know very little about it. It was learned that a number of interested national associations had combined their efforts in standardizing and labeling refrigerators, but as far as we could learn the recommended specifications have not been accepted by the manufacturers.

As for research agencies, Consumers' Research, Inc., was found to be the most helpful and reliable source of information. Though the number of commodities listed and graded in its leaflets is still somewhat small as compared with the number and variety the homemaker must buy every year, its range is unlimited and is expanding. The Federal government's part in guarding the consumer's dollar deals chiefly with food and food products. The proving institutes and the seal of approval of magazines were found pronouncedly influenced by their advertising.

The results of our two years' efforts are mostly negative. Our purchasing

McCarter Describes Life of Edison

(Concluded from Page 8, Column 4)

there he remained in harness practically to the end. Last October he was peacefully laid to rest in the near vicinity of his home, revered and mourned by the whole civilized world.

Three years ago Light's Golden Jubilee was celebrated by this association here in Atlantic City, and by a great demonstration in his honor staged by Henry Ford at Dearborn, Mich.—to which place Mr. Ford had removed most of the remaining buildings and paraphernalia that were in use at Menlo Park.

Proposed Memorial

This demonstration, which I had the honor of attending, was participated in by the President of the United States and by scientific and public leaders from all over the world. At the celebration in his honor conducted by this association three years ago in Atlantic City, it was suggested that it would be a fitting memorial to Mr. Edison to have a permanent shaft or tower of light erect-

ed at Menlo Park—the theatre of his great discoveries.

This tract of land had already been marked by a small but appropriate tablet by the Edison Pioneers. But the thought was that something larger and better should be placed there to forever memorialize his perfection of the incandescent lamp and the development of the electrical industry which has revolutionized the world. This met with cordial response from the Edison Pioneers.

Plan State Park

The legislature of the State of New Jersey in the year 1931 by enactment established the Edison Park Commission, with power to acquire by gift or by purchase when funds were available of a suitable tract of ground covering the scene of his activities at Menlo Park and the development thereof into a state park. Of the commission of five thus constituted by the governor, under the authority of the legislative act above referred to, I have the honor to be chairman.

"The times through which we are passing make it difficult for the state at the moment to appropriate money even for so worthy an object as the acquisition and development of this park, and I assume that the same reasons would temporarily militate against the raising

by popular subscription of a large sum of money with which to erect a permanent tower of light. Therefore this undertaking may have to proceed slowly, but it should not be allowed to grow cold.

Tower of Light

It must ultimately be accomplished so that this tower of light will forever shine in its position immediately along the line of the Pennsylvania Railroad and of the Lincoln Highway—which are directly in front of it—to be seen by all men. As has been said by another, the life of Mr. Edison typifies the indomitable spirit, the dynamic energy, the illimitable enterprise of the American people, who by their ingenuity, their enterprise and their ideals have developed this country.

I close with a quotation from the life of Mr. Edison, written while he still lived, by Arthur J. Palmer:

"He has led no armies into battle—he has conquered no countries—he has enslaved no peoples—yet he wields a power the magnitude of which no warrior has ever dreamed. He commands a devotion more sweeping in scope, more world-wide than any other living man—a devotion rooted deep in human gratitude, and untainted by bias of race, color, religion or politics."

What's new IN COMMERCIAL REFRIGERATION?

*Big things are happening in this industry
... and the Servel Dealer is the first to
keep abreast of worthwhile developments*



**SWIFTLY ... the world
moves on!**

**Overnight ... new uses for
Commercial Refrigeration are
discovered ... new applica-
tions developed ... new
markets opened.**

**In this ever-advancing industry, Servel leads
the way.**

**Through its alert engineering staff, through
allied laboratories, Servel constantly seeks
new ideas ... tests, proves, improves them
... then makes them speedily available to all
Servel Commercial Dealers.**

**If a wide-awake, up-to-the-second factory
connection appeals to your business judg-
ment ... ask about the practical, profitable
new Servel Commercial Dealer's franchise.**

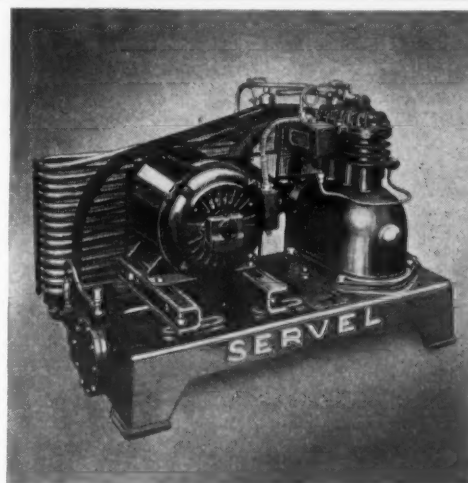
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*Manufacturers of a complete line of
household and commercial refrigeration*

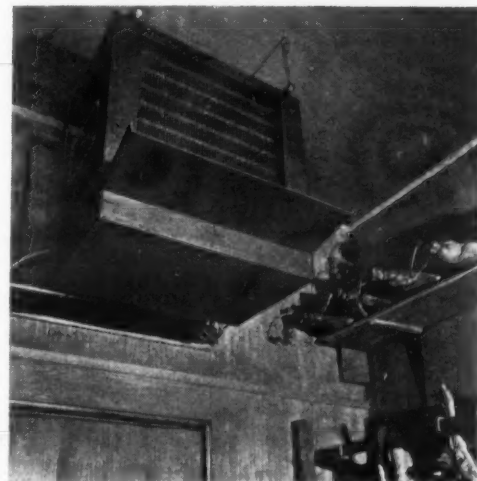
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Commercial
ELECTRIC REFRIGERATION



POWERFUL TON-PLUS MODELS ...

● Servel Dealers can sell these new
extra-capacity units ... for heavy-
duty installations that previously re-
quired two or more smaller models.



TRIPLE-CONTROLLED HUMIDRAFT ...

● Servel Dealers can offer this com-
pact, new fan-forced diffusing unit ...
for correct temperature, humidity
and air circulation in refrigerators.



GASOLINE ENGINE DRIVEN UNITS ...

● Servel Dealers can reach a vast, un-
touched rural market ... by selling
these new machine units to dairymen
who have no electric service.



COMFORT COOLING ...

● Servel Dealers can bring refreshing
climate-control to offices, homes and
many types of business places ... with
these modern room-cooling cabinets.

LITTLE STORIES OF INTERESTING
PEOPLE
IN THE REFRIGERATION INDUSTRY

THE EXPANSION VALVE

By George F. Taubeneck

LITTLE STORIES OF INTERESTING
IDEAS
IN THE REFRIGERATION INDUSTRY

'Buy Before the Tax'

The five per cent manufacturer's excise tax on household mechanical refrigerators is now in effect.

Inserted in the House revenue bill before anybody knew what it was all about, it was removed from the measure presented to the Senate by its Finance Committee—after the committee was besieged by letters from responsible men in the refrigeration industry, and after Louis Ruthenburg, Copeland president and chairman of the Nema refrigeration division, presented the industry's case so adequately to the committee.

In one of those pell-mell days when Congress decided that something must be done—no matter what—the Finance Committee's report was forgotten completely, and the tax on household mechanical refrigerators was restored, apparently without any especial consideration whatsoever.

The measure was passed, Hoover signed the bill, and the tax became effective Tuesday, June 21.

All over the nation dealers in electric refrigeration advertised: "Buy Now Before the Tax Is Added," last week. Scattering reports would indicate, however, that this argument was not particularly effective.

One thing did occur in that last-minute week, however. Several manufacturers shipped a great many more carloads of refrigerators than they had expected to ship.

Public utilities stocked up before the tax went into effect, as did some distributors who had plenty of extra cash on hand. As a result, a number of somewhat unexpected orders were wired in to several factories.

10-Year Free Service Guarantee

Lind's, a group of three electric refrigerator and radio retail stores located at various points in Detroit, is now advertising: "10 years' inspection and oiling service free on the refrigerator bought at Lind's."

The guarantee, which is labeled, "10 Year Free Service Guarantee," has the following stipulations:

"Lind's will inspect, clean and oil the electric motor of your refrigerator free of charge for 10 years.

"Lind's guarantees this service IN WRITING. Verbal promises are NOT dependable. You get a WRITTEN guarantee at LIND'S ONLY.

"Lind's will perform this service at regular six-month intervals. An expert will do the job.

"This written guarantee is your complete protection against unnecessary expense and trouble.

"The Lind guarantee is in addition to the regular free service guarantee of the manufacturer."



In connection with this advertisement the Valve can recall a hot afternoon in the summer of 1929 when a representative of a manufacturing concern, which is now assembling and marketing an electric refrigerator, called at the Electric Refrigeration News office and inquired where his firm could purchase electric refrigerator motors and cabinets.

He thought an electric refrigerator needed nothing else!

Lind's stores advertise Norge, Sparton, and Copeland refrigerators for sale, and "others from \$99.50—No freight charge. The advertised price is the price you pay. No 'extras' tacked on for delivery."

(It might be noted that Copeland refrigerators are shipped from Mt. Clemens, Mich.—about 20 miles from Detroit; Sparton refrigerators from Jackson, Mich.—about 75 miles from Detroit; and Norge refrigerators from

Les Wiswell Visits Sloppy Joe's



Les Wiswell, Leonard and Kelvinator distributor in Chicago, recently paid a visit to Sloppy Joe's famous bar—known familiarly by many refrigerator men—in Havana. Sloppy Joe's photographer snapped this picture of Mr. Wiswell (right), his wife and daughter, in one corner of this Mecca for thirsty Americans.

Muskegon, Mich.—about 190 miles from Detroit.)

The same concern also advertises free installation—"We will deliver and install your refrigerator, guarantee that it will be done right, and free of charge."

Terms begin at \$9.50 down and 20 cents a day.

Another Misleading Ad

The "10-Year Free Service Guarantee" reminds us of an advertisement run a short time ago by Michaels Bros., of Brooklyn. Glad Henderson, that rare combination of wit, space salesman, editor, professional goodfellow, and adviser to the industry, called our attention to it several days ago.

The advertisement was worded as follows:

"Again at Michaels Bros.—the event that stirred the town. Nationally known electric refrigerator with General Electric motor, General Electric automatic defrosting switch, General Electric cold control, Dry-Zero insulation, and chromium hardware—\$89, including delivery, installation, servicing. Two years to pay, and a written 4-year guarantee. Cheaper than ice. Costs about 5c a day to operate."

In largest letters are the words: "Electric refrigerator with General Electric motor, \$89." It's easy to see: "4-year guarantee," too.

The make of the refrigerator is not mentioned. It is perhaps unnecessary to add that the cut of the refrigerator which illustrated the advertisement did not show a Monitor Top.

It might also be noted that Fridg-aire men were probably not pleased with the statement, "General Electric cold control."

McElhinny Sees a Gold Rush

The days of '49 are being re-enacted in the West, where hordes of the unemployed are engaged in placer mining, declares W. D. McElhinny, vice president of Copeland Products, Inc., who has recently returned from a two months' trip through the West.

"My attention was first attracted to this movement," Mr. McElhinny told us, "when I was driving along the Platte River near Denver. I saw great numbers of people engaged along the shores, and was told that thousands are working along the streams in the mountains panning gold. I afterwards found that this movement was general throughout the old-time gold fields of the West.

"So great has this movement become in Denver that the city has conducted a school for gold panners as a means of relieving the unemployment situation. No special equipment is needed other than a pan with slanting sides, although some of the new placer miners have very elaborate equipment.

"Many stores in Denver are featuring placer equipment in their show windows, and some hardware stores are selling special placer miner machines operated by one or two men."

Panning gold is fairly simple, Mr. McElhinny states, depending mostly on the patience of the operator.

The pan must be kept free from oil and grease. The operator fills it nearly full of sand. The sand is immersed in water and is shaken and rotated vigorously. This loosens the sand and permits the gold, if any, to settle.

Large rocks and gravel are thrown out by hand, and the panner continues the rotary motion, leveling off the upper layers of sand and water.

Finally only black sand, bearing the gold, remains. In this sand are found small specks of gold, and an

occasional nugget. The results of 15 or 20 pannings are put together for a final panning.

"These panners make anywhere from 50 cents to \$5 a day, with occasional richer strikes," Mr. McElhinny says. "The meager returns supply bread and butter for persons hard pressed by present conditions."

Mr. McElhinny's trip included Los Angeles, San Diego, San Francisco, Portland, Seattle, Spokane, Salt Lake, and Denver.

Upholding the Machine

The paper on "What the Machine is Doing to Mankind," read by James E. Thomas, president of the Commonwealth and Southern Corp., Birmingham, Ala., interested us more than any other talk we heard at the N.E.L.A. convention. We obtained the paper, and it was printed on pages 15 and 16 of the June 15 issue of ELECTRIC REFRIGERATION NEWS.

The Commonwealth and Southern executive, however, by no means exhausted his thoughts on this subject in the paper which you may have read in that issue of the News. He could (and sometimes does!) talk all night on the subject. And his ideas are stimulating, indeed.

Some of the facts and figures and arguments which are so ready to fall from his tongue whenever you ask him a leading question are reproduced—fairly coherently, we hope—below:

Between 1920 and 1928, there was an increase in the number of workers in servicing and driving automobiles of 760,000, including 100,000 bus drivers, a vocation which did not exist in 1914. There were 100,000 more insurance agents in 1928 than in 1919.

These additional men were made necessary by the large expansion which took place in insurable fields incident to new industry and trades. Electric refrigeration, light and power, and oil heating establishments have increased employment by another 100,000. Between 1919 and 1928, another 100,000 were added through construction work and management.

There were 232,000 more teachers and professors required to look after the young in 1928 than in 1919. Motion picture servitors (not production employees) added another 125,000. Others included: Barbers and hair-dressers, 170,000; personal service in hotels and restaurants, 750,000; and radio, 200,000.

Thus it appears from the facts that, while we were displacing in America 1,957,000 people through increased efficiency made possible by the machine, we were adding in new trades and professions 2,537,000 people.

The difference just accounts for the increase in population during the period. Hence it is that as the machine becomes more and more efficient, the new service functions not only offset unemployment, but indicate a larger per capita earning power and thus increase the standards of living.

The machine plus brains equals goods, comforts, and wealth. This formula increased factory production almost 60 per cent between 1900 and 1925, and the same thing happened on the railroads, in the mines and on the farms.

The perfection of the tool has measured the speed of man's upward journey from the Stone Age to now. Considering all industries in the United States, 71 workers in 1925 could produce as much as 109 could produce just 25 years before, and while working from 5 to 10 per cent less time. Just here is the crowning glory of the machine.

Of course it is true that the productive output per worker has increased, that fewer men in a given field can do more work. But having admitted this much, there is no use being stampeded by the so-called intelligentsia.

To reduce the hours a man works in this world has always been considered a desirable thing to do. If the machine enables him to do more work in less time, it proves itself humane, not a menace.

The machine has many positive arguments it may modestly advance to justify its place in the sun. In the first place, it is a great educational force. It has reduced the physical fact of this world to a readily reached neighborhood, and the mental, racial, economic, and political facts of the world to a community problem.

It has widened the outlook and emphasized the relations of men. Isolation is now as simple as it is impossible. The railroads, autos and airplanes are taking us many places. The telegraph, telephone, and the radio are telling us many things.

Today the worker's relation to the world is what it used to be to his little community, and for the first time in human history the working man has been given some leisure to read, study and develop a hobby.

The machine has been a fairy god-mother to the toiler. Today, the problem of education is not so much to teach the man how to work as to teach the wise use of the leisure the machine has given him.

Psychologically, there is something in the machine which calls out the best there is in us. If you drive a car yourself, you are alert, observant, active. There are definite character-building processes going on in such an enterprise.

The comfort of the machine is something. The reaction of the human being to it is much more. The machine forces and demands a certain amount of intelligent interest. Machine workers rarely go insane. Few of them find it necessary to leave their jobs because of mental disorders.

In well-organized industry, there are recreational opportunities such as play grounds, tennis courts, moving pictures, cafeterias where ideas are exchanged and social intercourse indulged in, and many other opportunities for wholesome living.

In this connection, it will be helpful to observe that approximately 90 per cent of the women confined in asylums of the Southeast arrived there because of melancholia, and came from the quietude of the farm—so beautifully written about by the poets, and where so few poets care to live!

In the ancient Orient, the philosophy of defeatism has gripped millions of people. Where the fertility of the man outruns the bounty of the soil, the soul is broken with hardships, the individual is dwarfed by the crowd, and belief in the individual will disappear from religion, as well as from philosophy.

Under such conditions, happiness is conceived as a cessation of desire, a surrendered personality, and fatalism becomes the common possession of both priest and sage. In this seething humanity, the individual has no fundamental value and loses his significance. His past is both endless and tragic. He sees himself an atom projected unasked out of nothing into nowhere, struggling for awhile and inevitably, after a while, drawn back into the dark.

But in active, progressive, Western Civilization and the status quo don't get the respect they do in the East, we have a different philosophy of things. The machine will master man's environment. He will build temples to his God and schools of philosophy in which he may freely exercise his intellect.

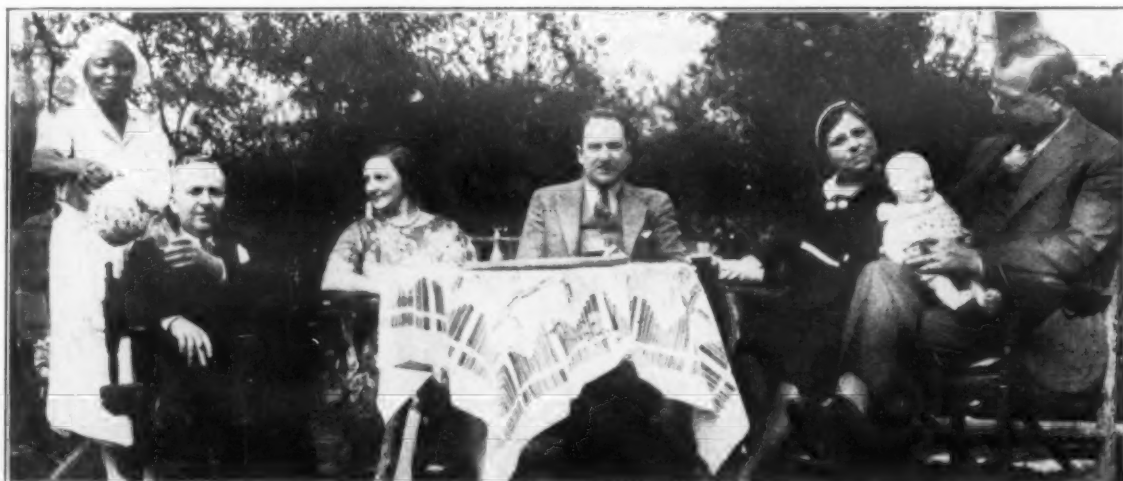
In such a civilization, the individual believes in the sacredness of his own personality, in his own creative ability. As the Greeks saw evolution and growth in the universe, and as Plato and Aristotle thought the world moved on toward perfect purpose, so the free mind of Western Civilization must continue to carry on this same high purpose.

Our gravest danger now is that we shall begin to substitute fatalistic, pessimistic, mass thinking for the rich exuberance of individualistic thinking and achievement. A tired civilization is a tragic spectacle.

Human behavior is not of the same order as erosion, or the flight of the wind. We must not stamp a hundred and twenty millions of individuals with the same die.

If we accept crowd philosophy, there is no escape. The machine, by freeing man from the forces of nature and giving him a command over his environment never before enjoyed, has made it possible to maintain the essence of Western Civilization, which is the mastery of environment, the bestowal of greater leisure, the democratization of the life processes and freeing all men for some creative, artistic achievement.

'Nother Mint Julep, Col. Petrie?



But "Col." R. I. Petrie, Leonard's sales manager (extreme right), is too busy playing ventriloquist or something, so John M. McGregor, Memphis distributor, takes the refreshing drink for him, while Lee Stratton, district manager, looks straight into the camera.

LEONARD DEALERS ON PACIFIC COAST MEET

SAN FRANCISCO—Six spring sales meetings of various Leonard distributors and distributor branches on the Pacific Coast have been held recently under the direction of a group of Leonard officials from Detroit headquarters.

A. M. Taylor, director of advertising, R. I. Petrie, sales manager, C. M. Armstrong, vice president of the Refrigeration Discount Corp., and J. B. Nicolson, Leonard district sales manager were among those who conducted the meetings.

At Los Angeles, 90 dealers served by Graham Hamby & Son, met at the Mayfair Hotel. A. E. Gibson, Los Angeles branch manager of Refrigeration Discount Corp., and Mr. Elliott, Electric Refrigeration Bureau, addressed the meeting.

Electric Supplies Distributing Co., Inc., personnel and 100 dealers attended a meeting at the Cabrillo Cafe, San Diego, a few days later. Sam Hall, president, Fred Goss, vice president, Basil Guthrie, secretary-treasurer, and Gene Cramer, sales manager of the distributing firm, appeared on the program.

Chanslor & Lyon Stores, Inc., distributor at San Francisco, sponsored three meetings, one in San Francisco, one in Fresno, and one in Sacramento. The Fresno meeting drew 109 dealers, and was addressed by N. J. Etienne, sales manager of the Chanslor & Lyon Stores, Inc., and Mr. McDonald, manager of the Fresno branch.

At San Francisco and Sacramento similar meetings were held with Chanslor & Lyon representatives as speakers.

Cronin Distributors, Inc., Portland, Ore., newly appointed Leonard distributor, held a sales meeting for 132 dealers and salesmen, and saw the Leonard movietone of factory operations.

The North Coast Electric Co. meeting, Seattle, had as its chairman Harry Byrne, Jr., while Harry Byrne, Sr., was one of the speakers.

GIBSONS ADVERTISED ON MOVING SIGN

BUFFALO—An electrical moving-word sign owned by the *Buffalo Times* is now being utilized to advertise Gibson electric refrigerators, according to John A. Bacon of the *Times*.

The sign flashes the following moving message: "Gibson Electric—The Most Beautiful Refrigerator in the World. Gibson gives you extra conveniences and economy of MonoUnit power. Gibson is backed by over half a century of exclusive refrigeration experience. It is so easy to own a Gibson!"

GENERAL ELECTRIC CUTS DIVIDEND TO 10 CENTS

SCENECTADY, N. Y.—Directors of the General Electric Co. have declared a quarterly dividend of 10 cents a share on the common stock, as against 25 cents for the previous quarter.

How a Distributor Operates

As Told By H. B. Levy of St. Louis Leonard Outlet

By Phil B. Redeker

ST. LOUIS—The radio dealer and what few music stores that are left in his territory are finding electric refrigeration a profit-building line, states H. B. Levy, vice president and wholesale manager of the Aeolian Co., Leonard distributor for the "49th" state, as St. Louisans like to describe the trade area centering around St. Louis.

Although the Aeolian Co. did not take on the Leonard line until February of this year, the sales volume on its refrigeration line is rapidly mounting and is threatening to surpass that of the radio and music lines, Levy says.

The territory covered by the Aeolian Co. extends as far north and east as Springfield, Ill., as far south as Cairo, Ill., and west to Moberly, Mo.

75 Dealers Since February

Some 75 dealers in this territory have taken on the Leonard line since February, 1932, Mr. Levy asserts. Of this number, he points out, about two-thirds are radio or music dealers. Among the Leonard dealers in the city proper are two department stores, both of which have done first-class jobs, Levy says.

Much of the success of the refrigeration division merchandising operations has been due to an aggressive advertising campaign, put on by the dealers with the cooperation of the distributor.

Aeolian Co. goes 50-50 in advertising expenditures with its dealer up to a certain fixed amount.

'Len-A-Dor' Appeal

The "Len-A-Dor" feature has been made a primary basis of appeal in an outdoor poster campaign in which the department stores have been particularly active.

Newspaper copy is of the direct appeal type. The oldest Leonard ice box contest which has been featured in the newspapers has brought a marked response from old Leonard users, resulting in the carding of many prospects who might not otherwise have been uncovered.

Radio broadcasts, while somewhat expensive as an advertising medium, have been found successful by some dealers, according to Levy.

An intensive drive has been made to get the dealers to use the Leonard 3-piece spring mailing campaign, and the merchandisers seem to be receptive to the direct mail idea, the wholesale manager states.

Floor displays maintained by St. Louis metropolitan dealers remain undisturbed when a sale is made, because all deliveries and installations are carried out by the distributor's service department.

The Aeolian Co. also handles all service work for dealers located in the metropolitan area.

Dealers in the more remote parts of the territory come to St. Louis, or send a representative, to attend 3-day service schools held periodically by the distributor. Levy states that this method

is finding favor with dealers who have been troubled by the prospect of "service worries."

A regular schedule of sales meetings for dealers and salesmen is being planned, in which Mr. Levy hopes to transmit factory plans to these men, and to keep alive the enthusiasm for outside selling.

Much of the success of the department store outlets, Levy believes, is due to the fact that they have maintained an outside selling force.

Department Store Outlets

This fact, coupled with their facilities for granting easy payments, have made them a real merchandising factor in St. Louis refrigeration circles. The natural flow of "buying public" traffic through the store is also a help, thinks the wholesale manager.

The Aeolian Co. carries on retail selling operations, but only in a small way. The distributor maintains a floor display and has a number of salesmen, but little outside selling is done.

Levy is working on plans to expand his dealer operations. Furniture stores, because some of them have good credit rating and the ability to handle long-time payments, are being given serious consideration as possible dealer outlets.

GIBSON COOKING SCHOOL

MUSKEGON, Mich.—Lectures on food economy and tips on summer recipes were given by Miss Jacqueline Frost, Gibson home economist, at a recent cooking school sponsored by the William D. Hardy department store, Gibson electric refrigerator dealer here, recently.

A Close Shave

HASTINGS, Nebr.—W. C. Bienkowski, owner of the Hastings Piano Co., recently faltered in his habit of shaving nightly just before retiring, but he closed two sales by letting his whiskers grow longer.

He had been working on a prospect all one day, and finally closed the sale in the early hours of the morning, and it was then too late to shave before dropping into bed.

Next morning he stopped off at the barber shop to be shaved. The barber commented on the unusual growth of beard, so while the barber shaved him, Bienkowski talked about Norge. Before he left the tonsorial parlor, Bienkowski had the barber's name on the dotted line.

BUREAU OFFERS TWO NEW UNITS FOR SALES DRIVES

NEW YORK CITY—A price list showing two new promotional units for electric refrigeration campaigns has been issued by the Electric Refrigeration Bureau.

First of the new methods of registering the slogan "Invest in an Electric Refrigerator" is that of the cubelite, a molded form of white opal glass which looks like an ice cube. Each cubelite contains its own lighting unit, in which standard bulbs may be used. One large cubelite may be had with the entire slogan printed thereon, or a set of smaller cubes may be had, each imprinted with one word of the slogan.

The other promotional scheme offered is that of cut-out wooden letters. The slogan is made up of wooden letters 2 in. high, fastened to an aluminum frame (green, white or silver finish), which may be hung on the side of a refrigerator.

WESTINGHOUSE DRIVE HITS \$1,503,260 MARK

EAST PITTSBURGH, Pa.—More than \$1,503,260 worth of sales of Westinghouse appliances were made during the month of May as a result of the Westinghouse employees sales crusade, far exceeding the company's predictions, according to H. C. Thomas, general chairman of the campaign.

The campaign, at the request of the employees, will be continued through June, as 25,000 recorded prospects have not yet made purchases.

The total sales of appliances numbered 35,607. The company's 53,000 stockholders have also entered into the campaign, and many are making sales or themselves buying.

During May, each Westinghouse employee pledged himself to sell one or more electrical domestic appliance. About 35,000 employees are now on the Westinghouse payroll.

No actual sales were made by the employees; prospective customers were located, and the sale went to the credit of an established Westinghouse dealer. Established prices prevailed during the drive; there was no price-cutting and there were no commissions paid for sales made.

Employee salesmen are being compensated with an award of merchandise prizes based upon points credited for sales.

Mr. Thomas reports that a number of requests from other companies for details of the drive have already come in, and 12 companies are utilizing the plan in their own organizations.

STEWART-WARNER SHOW

NEWARK, N. J.—Griffith Piano Co., recently appointed Stewart-Warner refrigerator dealer, announced its new line by demonstrating refrigerator cookery.

DOLLARS AND SENSE - -

- - A WINNING COMBINATION

WITH



Trade Mark Registered U. S. Pat. Off.

DOLLARS:-

1. Mr. Distributor receives one profit on the Taylor Freezer and another on the essential refrigerating machine.
2. He thus makes TWO PROFITS on ONE SALE.
3. That means Increased Profit and Decreased Sales Cost!

COMMON SENSE:-

1. TAYLOR FREEZER is first and foremost of counter freezers.
2. Seven hundred satisfied owners PROVE Taylor Freezer's high quality, reliable performance and public acceptance.
3. TAYLOR FREEZER is the result of 35 years ice cream manufacturing and merchandising experience.



CONFECTIONERIES
RESTAURANTS
DEPARTMENT STORES



HOTELS
HOSPITALS

SIX REASONS WHY DISTRIBUTORS WATCH TAYLOR FREEZER!

Taylor Freezer offers distributors of methyl chloride, ammonia and F12 refrigerating machines an exceptional opportunity to Increase their Net Profits and Decrease their Sales Costs. Write today for further information, advising type of refrigeration you now sell and territory you now cover.

TAYLOR FREEZER CORPORATION

BELOIT

WISCONSIN

WOLVERINE Seamless Copper Dehydrated Tubing



Quick, Perfect Flares —Without Splitting

On the job time is precious. That's where the integrity of Wolverine tubing counts most. Made only of 99.98/100% pure deoxidized copper—scientifically drawn to close specifications—A.S.T.M. B68-30T—annealed to absolutely uniform temper—it has to give perfect results in flaring, swedging, bending. Dehydrated and sealed with the famous "W". Plain or tin-plated. Quick shipment. Coils of 25, 50, 75 and 100 ft. lengths—larger on request.

WOLVERINE TUBE CO.

SEAMLESS COPPER BRASS & ALUMINUM

1491 Central Ave.
Detroit, Mich.

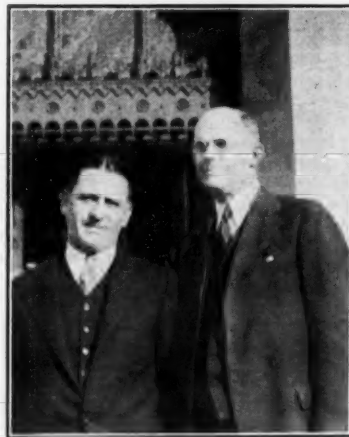
Export Dept.
H. M. Robins Co., Detroit

Sales offices in 26 cities. Eastern Sales Office—420 Lexington Ave., New York.
Stock available at Los Angeles, 1015 East 16th St.

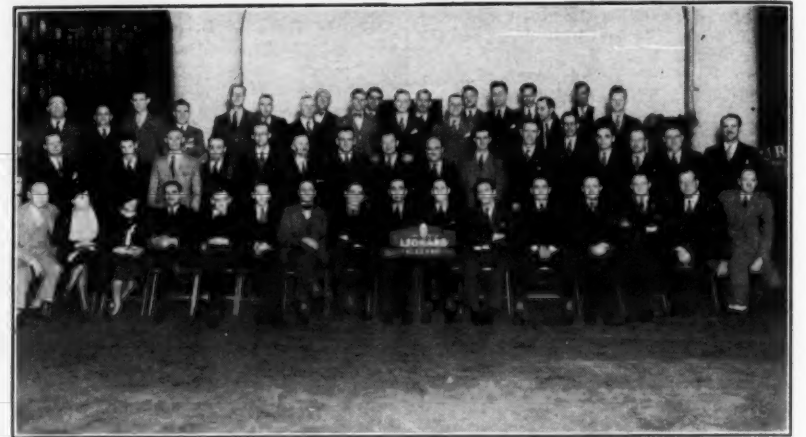
Leonard Executives Conduct Series of Sales Meetings



H. Leonard and Sons, Grand Rapids, Mich., distributor for Leonard electric refrigerators, entertained western Michigan dealers at a sales meeting recently at which summer sales plans were discussed.



Walker Stuart and Jack Dillard of Richmond, W. Va., Hardware Co., visited the Leonard plant recently.



Dealers operating under Smith Radio Corp., Louisville distributor for Leonard electric refrigerators, recently attended a sales meeting at which R. I. Petrie, sales manager of Leonard, talked.



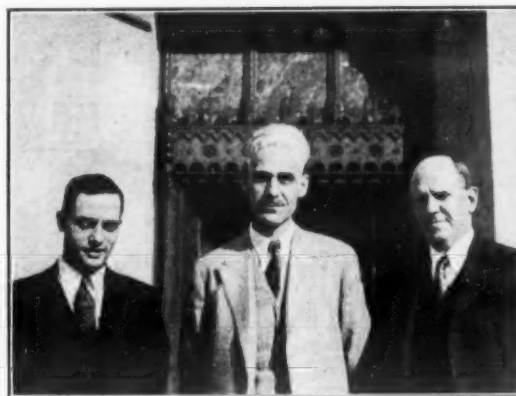
McGregor, Inc., Leonard distributor in Memphis, Tenn., and surrounding territory, entertained its dealers at a sales conference and banquet recently.



Leonard factory officials were guests at a banquet given by J. B. Williams Co., distributor in the Pittsburgh area, following an all-day dealer meeting.



In the spring series of dealer conventions, sales outlets representatives operating under Foster Thornling, Huntington, W. Va., distributor, made sales plans.



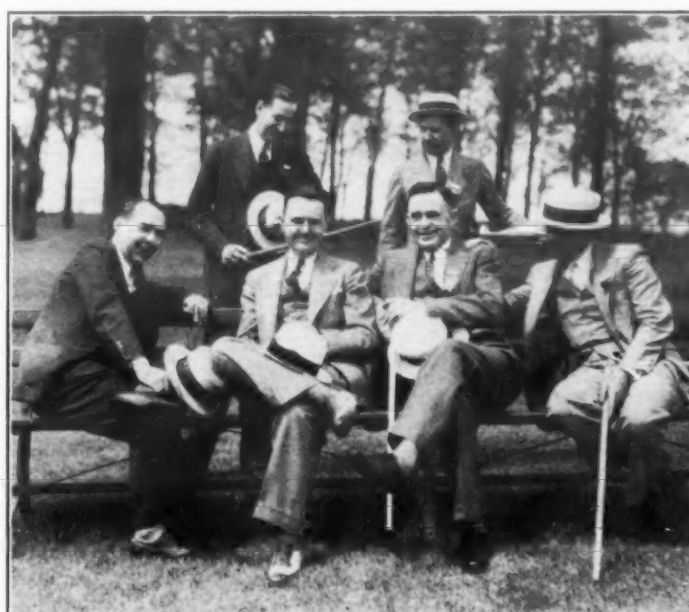
Messrs. Legge, King, and Wardle of Stimpson Philco Co., Wichita distributor, recently visited the Detroit plant of Leonard.



Sales activities in the Texas country were spurred by the "flying squadron" of Leonard factory officials at a dealer meeting of Peaslee-Gaulbert Co.



Executives take a day off. Norge sales leaders and officials of Borg-Warner Corp. start on a round of golf at Muskegon, Mich. Left to right: Eric Ekstrom, director; G. A. Shallberg, counsel, Borg-Warner; M. G. O'Harra, Norge eastern sales manager, and J. L. Dryden, Borg-Warner director.



This photograph includes (standing left to right): R. E. Caldwell, Cramer-Krasselt, and M. G. O'Harra, Norge eastern sales manager. Seated—J. A. Sterling, Norge sales promotion manager; C. H. Brehm, Cramer-Krasselt; Fred Adams, Waterloo, Iowa, distributor, and A. N. Delzieth, Norge field representative.



The winning foursome in the Norge distributor's gold match included: Herb Brennan, New York; H. A. Barnard, Oklahoma City, individual champion; French Nestor, Jacksonville, Fla., individual runner-up, and F. G. Cramer, president, Cramer-Krasselt Co., advertising agency.

DISTRIBUTORS' GROUP DRAWS UP PLATFORM

CHICAGO—Twelve planks in a "platform" relating to the refrigeration industry were adopted by the board of directors of the National Association of Radio, Refrigeration and Electrical Distributors, and the National Federation of Radio and Electrical Associations in a meeting at the Congress hotel here, May 23.

The N.A.R.R.E.D. board approved the appointment of a merchandise committee (names of committee members will be announced soon) to study the merchandising of products sold by members of the association, and authorized the executive offices to make further studies into the the subject of air conditioning.

In a recent survey made by the association, questions relating to the length of guarantee, length of free service, whether local advertising should be the installed or f. o. b. price, whether the distributors should assume the paying of freight on return defective merchandise, and other questions were asked of members of the association.

Using replies from 250 distributors as a basis for judgment, the N.A.R.R.E.D. drafted the following platform:

1. Allowance to distributors by their manufacturers for labor charges in replacing defective parts within the guarantee period.
2. Allowance to distributors by their manufacturers for labor charges in refinishing cabinets within the guarantee period.
3. Payment of freight or express charges, both ways, by the manufacturer, on defective merchandise returned to the factory for repair or replacement.
4. Protection against change in price or models for distributors and retailers. This protection to be adequate time notice of such changes and rebates for stocks on hand.
5. Reduction of excessive guarantees against defective parts or service charges by the manufacturer which work a hardship on the distributor and retailer, unless accompanied by an adequate allowance for such guarantees.
6. If list prices are mentioned in local advertisements, the list price should be the "installed price"—including delivery and installation in the home.
7. Promotion and stimulation of the education of service departments to enable the distributor and retailer to adequately service electric refrigerators.
8. Elimination of fake or misleading advertisements.
9. Elimination of unethical practices, particularly excessive terms—no down payments—leasing—free trials—premiums, etc.
10. Watching legislation to protect the

What a Sales Promotion Manager Does

As Told By A. C. Jordan, Leonard Sales Promotion Manager

By Phil B. Redeker

DETROIT—The main task of a sales promotion manager, believes A. C. Jordan, Leonard's man on that job, is to keep alive the dealer's interest in doing an aggressive merchandising job.

And in planning campaigns to keep dealers to a high pitch of enthusiasm, Jordan thinks the sales promotion manager can best function by placing himself in the position of a dealer, and thinking out just what a dealer expects a contest to do for him.

Results Dealer Expects

The dealer not only expects a special campaign to create enthusiasm in his salesmen, but to increase tangibly his business by making the public more interested in his product, or by bringing prospects to his store. Particularly proud, then, is Jordan of the Leonard "oldest ice box contest," which has resulted in the obtaining of 200,000 prospects, all users of Leonard ice boxes.

One of the tasks delegated to the sales promotion department is that of preparing a salesman's manual. Once these manuals were filled with material which was designed to demonstrate the advantages of electric refrigeration over more antiquated methods of food preservation. Pages of facts and figures, newspaper clippings, government reports, etc., went to show that electric refrigeration really was superior.

Contrasted to these overstuffed, weighty, documentary salesman's presentation books of yesterday is the present Leonard salesman's manual.

It is a large, black book, with an easel arrangement which allows it to be set up on a table. The presentation is "visual," white illustrations on black background, and the material concerns the selling features of the Leonard line. There is no argument for refrigeration presented. If the prospect isn't educated to the advantages of electric refrigeration (a rare instance), the salesman is supposed to have the arguments on the tip of his tongue.

What the manual does is to tell Leonard's story, from its "Len-A-Dor" feature, to its egg basket and one-piece

best interests of the industry.

11. Studying and developing methods for establishing the stability and reliability of all branches of the industry concerned with the service guarantees made to the refrigerator user.

12. Establishing a closer spirit of co-operation between all branches of the industry for their mutual benefit.

porcelain construction. In the back of the book are illustrations of the various models, and closing the book is a picture of the Leonard factories, and a word about the organization behind the product.

In addition to the salesman's manual, there is a booklet for instruction of dealer operations. This book is strictly a text on "how to sell," and is of little direct use in explaining the product to a prospect.

It opens with suggestions on the manner in which the dealer can analyze his market, and points out that certain groups, such as users of Leonard ice boxes, represent a primary source of prospects.

The next section deals with the instruction of salesmen in the merchandising of refrigeration, pointing to certain types of technique to be used in specialty work, and calling attention to the sales manual.

Correctly presented floor displays, window displays, and outdoor signs are touched upon. Facts about factory advertising and publicity are made clear.

Prospect Follow-Up

A good deal of material is given over to the filing of prospect's names, and proper follow-up by salesman's calls, direct mail, and telephone.

The work of the Refrigeration Discount Corp. in handling time payments is explained.

"Then, if there is something that the dealer wants to know about putting on a contest, or the use of the direct mail, the sales promotion department is a clearing house of information for his benefit," Jordan states.

The creation of direct mailing pieces

forms part of the work of the sales promotion department. Not only must the sales promotion manager decide on the form of these pieces (folders, envelope stuffers, etc.), but he must decide on the story that the literature is to tell.

The 1932 direct mail campaigns have laid down a heavy barrage on the special Leonard features.

Three direct mail campaigns over a year's period offer enough change in the type of material which is sent out, Jordan believes.

All mailings are done by the dealers. The job of the sales promotion manager, however, is to get the dealers to use direct mail. Jordan does this in a somewhat indirect manner by encouraging the factory field representative and the wholesale representative of the distributor to "talk up" use of direct mail to the dealer.

Local 'Publicity' Releases

The sales promotion department does a great deal of work in helping the dealer to gain local publicity. A regular series of "publicity" releases are sent to the dealer from the sales promotion department, and the dealer is urged to submit these to the local press.

One of the principal pieces of activity by the sales promotion department is the encouragement of dealer activity in publicity enterprises. Cooperative shows and home-building exhibitions in particular are considered fine points of "exposure" for the Leonard line. The sales promotion department, in addition to encouraging such enterprises, often lends actual assistance by laying out exhibits, or sending special promotional paraphernalia.

SALES MANUAL FOR RANGE MEN ISSUED

CHICAGO—Complete from directions on how to find electric range prospects to how to close sales is a home sales training course just completed by Edison General Electric Appliance Co., for distribution to General Electric Hot-point range salesmen.

The course is outlined in 12 pocket-sized booklets, and was prepared in co-operation with the LaSalle Extension University, which specializes in home training methods. Two of the booklets are now ready.

Such subjects as why and how the buyer buys, handling the sales interview, presenting and demonstrating the range, selling the source from which to buy, closing the sale, actual sales plans which have succeeded, are included.

Five primary buying motives are given in a discussion of influencing a prospect to buy: desire for comfort and convenience; protection and safety; gain and economy; satisfaction of affection, and satisfaction of pride.

The buying process includes five divisions, salesmen are told: the need, the thing to satisfy the need; the source from which to buy; the price and terms; the time to buy.

OIL BURNER ASSOCIATION TO SELECT CONVENTION CITY

NEW YORK CITY—Selection of a centrally located city for the 10th annual Oil Burner Show and Convention, to be held in the late winter or early spring of 1933, will be among the business to be considered at the regular quarterly meeting of the board of directors, American Oil Burner Association, on July 12 at the Kahkwa Club in Erie, Pa. Manufacturer members will meet July 11.

THIS MAN— who sees them all and plays no favorites —CALLS LEONARD'S THE "HOTTEST" FRANCHISE IN THE INDUSTRY

A MAN who spends his time calling on electric refrigerator and radio distributors and dealers—who is familiar with all that goes on in the industry—who is connected with no manufacturer and has no ax to grind—recently made this statement to a group of refrigerator men:

"I consider the Leonard franchise the best in the industry. Leonard has the 'hottest' line to begin with—the most selling features and the greatest value. And I find Leonard distributors happier and better satisfied with their volume and their profits than any I have met."

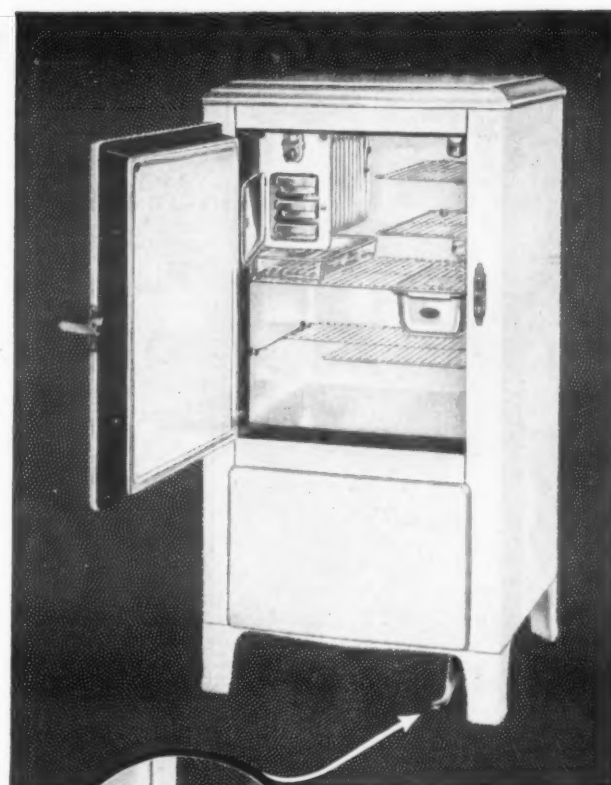
Such a statement, from such a source, deserves action on the part of business men who want to share in the profits electric refrigeration is earning. There is ample evidence to support it. The LEN-A-DOR and other extra features mark this line as the outstanding value of the industry. And Leonard's remarkable sales record indicates that the public wants Leonard quality at Leonard's new low prices.

Write or wire now for details regarding the Leonard line of 9 new portable models (3 all-porcelain), and the sales and merchandising plans that help make this franchise a real money maker.

LEONARD REFRIGERATOR COMPANY
14256 Plymouth Road, Detroit

LEONARD
ELECTRIC REFRIGERATOR

GREATEST CONVENIENCE
FEATURE IN THE INDUSTRY **THE LEN-A-DOR**



A TOUCH OF THE TOE AND
THE DOOR SWINGS OPEN

NERCO ELECTRIC WATER COOLERS



"NATIONAL ELECTRIC" offers a valuable franchise—a most complete line of Electric Water Coolers with sizes and styles to meet every requirement—a most profitable line—Beautiful in appearance—Quiet in operation—Large capacities—Beverage cooling compartment at no extra cost—Unusually fine construction—A De Luxe line priced low.

Write or Wire for Complete Details. A NERCO Franchise will be most profitable to you.

National Electric Refrigeration Corp.
SCRANTON, PA.

Manufacturers of Water Coolers Exclusively

KELVINATOR DEALERS USE GOLF BALLS AS FAVORS

DETROIT—Golf balls with the company imprint are being used as advertising favors by Kelvinator dealers this summer.

Testing Laboratory
For refrigerators
and refrigerating equipment
George B. Bright Co.
Refrigerating Engineers and Architects
2615 12th St., Detroit, Mich.

the PUREST SULPHUR DIOXIDE
Extra dry
ESOTOO
75 WEST ST. N.Y. 131 STATE ST. BOSTON
VIRGINIA SMELTING CO.
WEST NORFOLK, VA.

Dealers! You need these
Finest Quality Enamel.
PRICES RIGHT.
orders filled promptly.
875 Doz. 450 %
FACTORY WAREHOUSE
DETROIT, MICH.

Fulco
Refrigerator
COVERS
Insure deliveries without scratched or broken enamel. Write for prices.
Fulton Bag & Cotton Mills
Albany, N.Y.
Phila., Pa.
New York, N.Y.
Chicago, Ill.

Testing Service

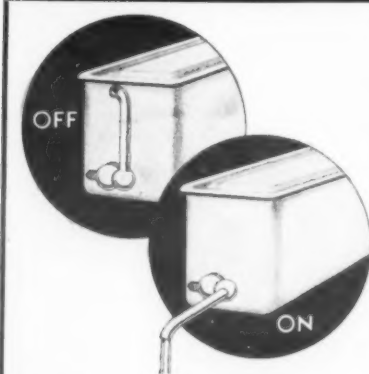
for Domestic and Commercial
Electrical Refrigeration
Testing and experimental
laboratory service for Man-
ufacturer, Distributor, Cen-
tral Station. Test data ex-
clusive property of client.

ETL Electrical Testing
Laboratories
Know by Test
80th St. & East End Ave.
NEW YORK

Mastercraft Refrigerator Pad and Carrying Harness

The Mastercraft Pad and Carrying Harness are adjustable to all sizes refrigerators to 11 cubic feet capacity. They are sturdy, convenient and inexpensive. Recommended by all leading manufacturers. Pads attractively lettered with refrigerator name.
Write for special pad booklet.

BEARSE MANUFACTURING CO.
3815-3825 CORTLAND ST. CHICAGO, ILL.



MR. DISTRIBUTOR:
you get a
better discount on the
COLD DRINK

Before you stock any line of water coolers write for Hamburg Bros.' proposition on Coldrink... the best discounts in the business and a low retail price. See the new seamless model which fits all electric refrigerators. White enamel with rounded corners, chromium finish, fast flowing faucet. Can never rust. Cash in on this fast selling specialty now.

HAMBURG BROS.
963 Liberty Ave., Pittsburgh, Pa.

LEONARD ENLARGES SALES ORGANIZATION

(Concluded from Page 6, Column 5)

Piano Co., Cairo, Ill.; Show Boat Radio Stores, St. Louis, Mo.; J. W. Gilbert, Dixon, Mo.; Jones Hudson Sales Co., Centralia, Ill.; Scott Electric Co., St. Louis.

F. W. Rabe, Baldwin, Ill.; J. F. Henson, Taylorville, Ill.; M. J. McDonald, Centralia, Mo.; Mahan & Motch, Kinmundy, Ill.

EL PASO, TEX.

EL PASO, Tex.—Eight new dealers have recently been appointed by Momen, Dunnegan & Ryan Co., Leonard distributor here. These new dealers are: Delgado's Service Station, Belen, N. M.; Globe Furniture Co., El Paso; Jacob Peternel, Gallup, N. M.; Tempe Hardware Co., Tempe, Ariz.; R. B. Griffin, Superior, Ariz.; O'Bryan & Son, Safford, Ariz.; Scott & McMillan Furniture Co., Jerome, Ariz.; Sutton Electric Co., Mesa, Ariz.

NEW ORLEANS

NEW ORLEANS—Three new dealers have just been appointed by Specialty Sales Corp., Leonard refrigerator distributor. They are:

Frank J. Dauterive, New Iberia, La., and Collins Music Shop and Emile M. Babst Co., both of New Orleans.

DENVER

DENVER—Hendrie & Bolthoff Mfg. & Supply Co., Leonard electric refrigerator distributor at Denver, announces the appointment of Newton S. Gates & Son, Gordon, Neb., Alamo Mercantile Co., Alamo, Colo., and Guthrie & Jacobs, Burlington, Colo., as new dealers.

OKLAHOMA CITY

OKLAHOMA CITY—Spurriers, Inc., distributor for Leonard electric refrigerators in Oklahoma, has added the following names to its list of Leonard dealers:

Donnelly Music Co., Inc., Blackwell; Collier Bros., Duncan; Southwestern Electric Co., Oklahoma City; Coffin Motor Co., Guthrie; Hoffman Music Co., Miami; Maloch's Book Store, Perry; Oklahoma Tire & Supply Co., with branches in Okmulgee, Ft. Smith, Ark., and Sand Springs.

Collier Brothers, with branches in Seminole, Wilson, Healdton, Ringling, Ardmore, Durant, and Buckburnett, Tex.; Kline Bros., Hitchcock; J. P. Wingham, Sentinel; R. C. Ryan, Maramee; The Pioneer Store, Hominy; Oklahoma Tire & Supply Co., Tulsa; People's Furniture Co., Delhart, Tex., and Calhoun Dry Goods Co., Muskogee.

Unless otherwise stated, all the above cities are in Oklahoma.

SYRACUSE, N. Y.

SYRACUSE, N. Y.—Dealer appointments numbering six have been made recently by the Warner Distributing Corp. of this city. The new dealers are:

M. A. Meagher Co., Skaneateles; Cole Home Furniture Co., Binghamton; Oscar W. Butts, Oneonta; L. A. Witherill, Inc., Syracuse; Little Falls Battery & Tire Co., Little Falls; T. I. Billingham, Clinton.

NEW YORK CITY

NEW YORK CITY—New Leonard dealers recently appointed in the New York area by E. B. Latham & Co. are as follows:

Globe Motorists Supply Co., Mt. Vernon; B. V. Megrath, Newburgh; Central Radio Co., New York City; Howard Johnston, Brooklyn; H. M. Hendrickson, Valley Stream, L. I.; Red Circle Garage, Keyport, N. J.; Edward Kiefer, Northport, L. I.; George Nagen-gast, Lindenhurst, L. I.

Chris Hanson, Amityville, L. I.; Heide-man Radio & Electric Shop, White Plains; Fabis Quilt & Mattress Mfg. Co., Brooklyn, and Ral Plumbing Supply Co., Passaic, N. J.

KNOXVILLE, TENN.

KNOXVILLE, Tenn.—C. M. McClung & Co., Leonard distributor at Knoxville, announces the following dealer appointments within the last few months:

Dickey & Anderson, Copperhill; J. B. Phillips Hardware Co., South Pitts-burgh; Tunnel Hardware Co., Chat-tanooga; Bayless Hardware Co., Athens; Boyd-DeArmond Furniture Co., Edwin;

Acme Electric Co., LaFollette, and May-tag Appliance Co., Knoxville.

DES MOINES, IOWA

DES MOINES, Iowa—Addition the dealer organization of the A. A. Schneid-erhahn Co., Leonard distributor in central Iowa, are as follows:

Huber Electric Co., Charles City; Sterling Hardware Co., Williams; A. H. Werner, Allison; George J. Kaiser, Waverly; Ryan & Severson, Emmetsburg; D. D. Jones, Artesian, S. D.; Mikesell Motor Co., Chariton; A. B. Tweeten, Swea City; Nabers Home Appliance Co., Ft. Madison; W. S. Holbrook Furniture Co., Davenport.

George A. Miller, Storm Lake; C. E. McLeran, Mt. Pleasant; People's Gas & Electric Co., Burlington; L. W. Swanson, Algona; Satre Bros., Stanhope; Zimmerman's Radio Shop, Monticello; Boyd Furniture Co., Baxter; H. Van Dyke & Sons, Sheldon; Maurice Hill Plumbing & Heating Co., Dubuque; Sterling Hardware, Williams; The Specialty Store, Manson; N. J. Martin, West Union; Fred Bossert, Tipton; McGregor Co., Marshalltown.

PITTSBURGH

PITTSBURGH—The J. A. Williams Co. has increased its list of dealers by the addition of 20 names this spring.

The dealers located in Pennsylvania are as follows:

Edward T. Bates Co., Meadville; H. J. Lucot Hardware Co., Pittsburgh; Euwer & Co., Jeannette; Hibner-Hoover Hardware Co., DeBois; Swenson's Radio Shop, Renova; Hahn Furniture Co., branches in Carnegie, Pittsburgh, and Braddock; Murphy Electric Co., Greensburg.

Louis Ross, Avella; St. Marys Electric Supply Co., St. Marys; B. W. Reeder, Mt. Union; George C. Rohland, West Newton; Colin's Garage, Brackenridge; Klein-Simpson Co., Point Marion; Industrial Electric Co., New Brighton; S. & R. Motor Co., Indiana, and Polangin Music Shop, Farrell.

Two dealers were appointed in the West Virginia portion of the territory: Wilson-Eddy & Son, Fairview, and Service Stores Corp., Barracksville.

HOTPOINT EMPLOYEES TAKE COURSE IN RANGE COOKING

CHICAGO—Employees of Edison General Electric Appliance Co., Inc., manufacturer of General Electric Hotpoint ranges, are turning cooks in order to better understand the various features of the product they help to make.

Cooking schools are being held for them at the General Electric Kitchen Institute, located in the executive buildings of Edison General Electric Appliance Co., where they prepare meals on the ranges themselves.

Miss Frances Weedman is director of home economics for G. E. Hotpoint and in that capacity is supervising the work of a number of assistants who now are conducting free electric cooking schools in various sections of the country. Many of such schools are being sponsored by newspapers in distributor or dealer cities and G. E. Hotpoint dealers are tying-in with the activity.

COPELAND DISTRIBUTORSHIP IN CALIFORNIA FORMED

STOCKTON, Calif.—The Peffer Music Co., Copeland dealer here since April, 1930, has organized the Copeland Pacific Co. of San Francisco, to distribute Copeland electric refrigerators in northern California.

The Peffer company owns and operates its own radio station, KGDM, at Stockton.

The newly organized distributing firm is under the management of Messrs. Keamper and Barrett, formerly with Listenwaller & Gough, electrical supply house of San Francisco.

KELVINATORS INSTALLED IN APARTMENTS

LOS ANGELES—Independent Refrigeration Co. announces that it has received a contract for the installation of Kelvinator refrigerators in the Sherwood Apartments, Los Angeles.

The installation comprises 75 kitchens and three 1½-hp. water-cooled compressors.

CLINARD CO. APPOINTED LEONARD DISTRIBUTOR

WINSTON-SALEM, N. C.—The Clinard Electric Co. of this city has been appointed Leonard distributor in central North Carolina, according to an announcement by the Leonard Refrigerator Co.

B. C. Clinard is president, and Charles R. Clinard, vice president of the company.

BUYER'S GUIDE

Manufacturers Specializing in Service
to the Refrigeration Industry

SPECIAL ADVERTISING RATE (this column only)—\$12.00 per space. Payment is required monthly in advance to obtain this special low rate. Minimum Contract for this column—13 insertions in consecutive issues. All advertisements set in uniform style of type with standard border. Halftone engravings of 100-line screen, either outline or square finish. No reverse cuts or heavy black effects. No charge for composition.



SELF-LIFTING PIANO TRUCK CO.
FINDLAY, OHIO

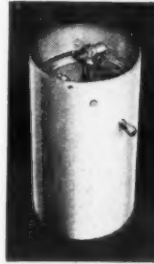
Save one man on deliveries. Make heavy lifting easy—quick. Eliminate damage to cabinets—floors—walls.

X-70 REFRIGERATOR TRUCKS
Fit all cabinets, with or without legs, or in the crate. Capacity, 1,200 lbs. All steel frame, 4" rubber tired wheels, one truck with top casters and handles for tilting and rolling into delivery truck and on the stairs. Only pads touch cabinet. Last a lifetime. Complete set \$34.50. Ball bearing swivel casters on one end, \$5 extra.

X-60 REFRIGERATOR TRUCKS
Handle leg cabinets only. Per set, \$31.50. Spring steel hooks to convert into X-70 available separately. Ball bearing swivel casters on one truck, \$5 extra.

FINDLAY REFRIGERATOR TRUCKS
For leg cabinets only—padded steel frames—4" rubber tired wheels. Per set, \$18.00.
Manufacturers of Trucks for 32 Years

FROSKIST WATER COOLERS



Pressure Type
Direct Expansion
Sizes 5 Gal. to 100 Gal.
For use with F12, Sulphur Dioxide, Methyl Chloride, and Ammonia

H. C. PARKER, LTD.

2600 Santa Fe Avenue (Factory), Los Angeles, California
437 Montgomery St., Jersey City, N. J.
510 Larkin St., San Francisco, Calif.
734 M. & M. Bldg., Houston, Texas
237 Roosevelt Bldg., St. Louis, Mo.
37 W. Van Buren St., Chicago, Ill.

Fruit & Vegetable Baskets Mechanical Springs Wire Food Shelves

We give prompt service and excellent workmanship.
Send us your inquiries.

L. A. YOUNG SPRING & WIRE CORP.
9200 Russell St. Detroit, Mich.



We can take care of your
entire requirements of



Refrigeration Parts and Supplies

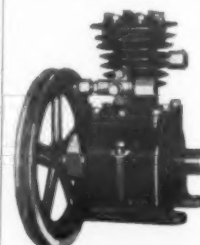
Stocks at
116 Broad St., New York, N.Y. 523 Arch St., Phila., Pa.
Melchior, Armstrong, Dessau Co.

A big waiting market for Commercial Refrigeration Equipment

BOTTLE COOLERS

Five Models for Your Commercial Compressor Units. Now is the season to "cash in" on this sure market.

Ask for Catalog "R" and tell us what line of commercial compressors you handle.
S & S PRODUCTS CO. 15 Ree St. LIMA, OHIO
Exclusively Bottle Cooler Manufacturers



Ask Us To Prove It

We claim Brunner refrigeration units render trouble-free, quiet, economical service. We can prove our claim. Ask us to do it. Send for the complete Brunner story. Refrigeration Division, Brunner Mfg. Co., Utica, N. Y.

HIGH SIDES and COMPRESSORS by BRUNNER

The 1932 Refrigeration Directory and Market Data Book

470 pages of facts, figures and names—the most complete statistical data and buying information ever compiled for the refrigeration industry. An invaluable reference book for sales, engineering, and purchasing executives; for distributors, dealers, salesmen and servicemen.

\$2.00

Postpaid in U.S.
Foreign postage,
50 cents extra.

BUSINESS NEWS PUBLISHING CO.
550 Maccabees Bldg., Detroit, Mich.

Delivery--Warehousing Service

We are specialists in warehousing, delivering and installing all types of Domestic and Commercial Refrigerators.

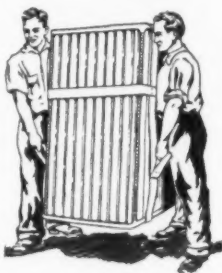
Our Warehouse is Fireproof, steam heated and protected by sprinkler system. We have our own Railroad Sidings.

Rates Are Nominal

Correspondence and Inspection Invited

M. & L. CO.

177 Pacific Street, Brooklyn, N. Y.
168 E. 33rd St. New York City 711 E. 139th St.



Specially designed REFRIGERATOR COVER and CARRYING HARNESS

Form-fitting covers made of canvas outside—mole-skin lining inside—with thin felt filling, firmly stitched. Impossible to rip. The "E-Z" Lift web harness eliminates strained backs and delivers the heaviest refrigerator with a minimum of effort. Easy grip.

Web Harness—\$7.00 Complete
Covers—\$8.00, \$10.00 and \$12.00

America's largest pad manufacturers

NEW HAVEN QUILT & PAD CO.
80-86 Franklin St., New Haven, Conn.

TO THE CANADIAN TRADE

You can get quicker delivery at lower cost by ordering from us

We carry in Stock

COMPRESSORS—COMPRESSOR UNITS—NON-FROSTING COMMERCIAL COILS—BOILER TYPE COILS—COPPER TUBING—FLARE AND SOLDERING FITTINGS—THERMOSTAT AND PRESSURE CONTROLS—DEHYDRATED OIL—AND MANY OTHER PARTS.

THE ARCTIC ICE & FUEL CO., LIMITED
Winnipeg, Man.

A NEW FIN COIL by PEERLESS

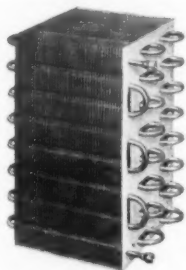
Wedge-Locked and Edge-Locked Aluminum Fins on Tinned Copper Tubing—
Absolute Metal to Metal Contact.

A Superior Coil in which Soldered Return Bends have been eliminated.

Priced to meet 1932 conditions.

Write—Wire for Catalog.

PEERLESS ICE MACHINE CO., 515 W. 35th St., Chicago, Ill.



COMPLETE SPECIFICATIONS of all important makes of HOUSEHOLD ELECTRIC REFRIGERATORS

The June 29, 1932 issue of ELECTRIC REFRIGERATION NEWS will contain the most complete tabulation of specifications of household electric refrigerators ever published. The nine full pages of data, covering 240 models of 33 different makes, which appeared in the May 18 issue, are being revised.

DOLLAR SPECIAL: Send a dollar bill and receive the June 29 Specifications Issue and the following issues every week for a total period of 17 weeks.

Electric Refrigeration News, 550 Maccabees Bldg., Detroit

Subscribe Now and Save Money

Special Offers

Note—Combination rates are for United States only.

COMBINATION OFFER No. 1
Electric Refrigeration News 1 Year and
Directory and Market Data Book
Combination Price \$4.00. Saves You \$1.00

COMBINATION OFFER No. 2
Electric Refrigeration News 2 Years and
Directory and Market Data Book
Combination Price \$6.00. Saves You \$2.00

COMBINATION OFFER No. 3
Refrigerated Food News 1 Year and
Directory and Market Data Book
Combination Price \$2.00. Saves You \$1.00

COMBINATION OFFER No. 4
Refrigerated Food News 1 Year and
Electric Refrigeration News 1 Year
Combination Price \$3.50. Saves You \$.50

COMBINATION OFFER No. 5
Directory and Market Data Book and
Electric Refrigeration News 1 Year
and
Refrigerated Food News 1 Year
Combination Price \$4.50. Saves You \$1.50

BUSINESS NEWS PUBLISHING CO.,
550 Maccabees Bldg., Detroit, Mich.

☐ Enclosed is remittance for \$.....
☐ Please enter my order for COMBINATION OFFER NO.....at \$.....
☐ Enter subscription to Electric Refrigeration News ☐ 1 Yr. \$3.00, ☐ 2 Yrs. \$5.00.
☐ Enter subscription to Refrigerated Food News ☐ 1 Yr. \$1.00, ☐ 2 Yrs. \$1.50.
☐ Send 1932 Refrigeration Directory and Market Data Book. \$2.00 per copy.

Name

Address

City State.....

6-22-32

REQUESTS FOR INFORMATION

Please refer to the 1932 Refrigeration Directory and Market Data Book for a complete list of all manufacturers of refrigeration equipment, parts, materials, supplies and accessories; also for all available statistical data on sales of refrigeration equipment, distribution methods, etc.

To obtain a copy of this book send \$2.00 to Business News Pub. Co., 550 Maccabees Bldg., Detroit, Mich.

Advertisers will be given preference in published answers to requests for buyer's guide service, but a complete list of all known suppliers will be mailed if stamped, self-addressed envelope is enclosed with inquiry.

Readers who can be of assistance in furnishing correct answers to inquiries, or who can supply additional information, are invited to address Electric Refrigeration News, mentioning query number.

Frozen Milk Products

Query No. 822—"I am writing you on behalf of my government to see if it would be possible to get all the technical information about a special procedure to freeze milk and cream without altering its chemical or other properties, but which automatically forms frozen blocks.

"The invention would be of the greatest importance for my country, in which the milk industry is becoming each day more important." Juan Emilio Capurro, 149 Church St., New York City.

Portable Refrigerator

Query No. 823—"Could you tell me where I could get a small refrigerator for an auto camping outfit?"

Room Coolers

Query No. 824—"Can you inform us of anyone who makes a reliable room-cooling outfit for both offices and restaurants?"

Answer—"A list of manufacturers of such equipment will be found on page 342 of the 1932 REFRIGERATION DIRECTORY and MARKET DATA BOOK.

Frigidaire Valves

Query No. 825—"Could you advise me

if the two-temperature valves and the snap-action valves are manufactured by Frigidaire Corp.? If not, could you kindly give me the name and address of the company manufacturing them?"
Answer—Both valves are manufactured by Frigidaire Corp., Dayton.

Ethyl Chloride

Query No. 826—"Can you tell us where we can obtain ethyl chloride gas for a Holmes refrigerator? We have a machine to service and cannot find any place to obtain the gas for it."

Answer—"A complete list of suppliers of ethyl chloride refrigerant may be found on page 286 of the 1932 REFRIGERATION DIRECTORY and MARKET DATA BOOK.

Iso-Butane

Query No. 827—"We are trying iso-butane for use in our shop. Will you please let us know where we can get this in small quantities?"

Answer—"A list of suppliers of iso-butane may be found on page 286 of the 1932 REFRIGERATION DIRECTORY and MARKET DATA BOOK.

Refrigerator Hardware

Query No. 819—"I should be greatly obliged to you if you would kindly inform me of some addresses of American refrigerator hardware factories. I have an especial interest in the address of the manufacturer of the hardware used on Gibson refrigerators." (Query from German firm.)

Answer—"Gibson refrigerator hardware is manufactured by Grand Rapids Brass Co., 66-90 Scribner Ave., Grand Rapids, Mich. Other manufacturers of refrigerator hardware are listed on page 206 of the 1932 REFRIGERATION DIRECTORY and MARKET DATA BOOK.

Oil-Burning Refrigerator

Query No. 820—"We are trying to get in touch with some reliable company which manufactures an oil-burning refrigerator for use in rural districts where neither gas nor electric current is available."

Answer—"Perfection Stove Co., 7609 Platt Ave., Cleveland; and Electrolux Refrigerator Sales, Inc., Evansville, Ind.

Export of Refrigerators

April, 1932, Shipments Reported by the Bureau of Foreign and Domestic Commerce

	Electric Household Refrigerators	Electric Commercial Refrigerators Up to 1 Ton	Parts for Electric Refrigerators
	Number	Value	Value
Belgium	212	\$ 24,844	\$ 15,670
Czechoslovakia	12	3,701	260
Denmark	2	3,322	4,435
Finland	187	4	486
France	129	9,892	51
Germany	79	5,345	217
Gibraltar	4	425	
Hungary			2
Irish Free State			18
Italy	108	5,346	189
Malta, Gozo, and Cyprus	1	274	
Netherlands	68	6,795	27
Norway	69	5,772	30
Portugal	3	300	
Rumania			10
Spain	51	7,085	31
Sweden	37	2,235	33
Switzerland	139	13,765	72
United Kingdom	1,089	55,842	125
Yugoslavia	15	1,558	11
Canada	524	38,938	378
British Honduras			
Costa Rica	2	200	
Honduras	1	189	
Nicaragua	1	1,110	
Panama	31	4,253	7
Salvador	2	528	
Mexico	18	2,590	16
Newfoundland and Labrador	1	74	
Bermudas	14	2,070	1
Barbados	14	74	
Jamaica	14	2,313	2
Trinidad and Tobago	1	89	
Other British West Indies			2
Cuba	24	2,787	5
Dominican Republic	8	1,119	
Netherland West Indies	1	89	112
Haiti, Republic of	3	401	
Virgin Islands of U. S.			
Argentina	6	612	7
Brazil	49	7,738	5
Chile	6	575	
Colombia			
Ecuador	1	128	
British Guiana	2	464	
Paraguay			
Peru	2	217	
Uruguay			
Venezuela	14	1,371	2
Arabia	4	671	
British India	139	14,142	25
British Malaya	14	1,312	
Ceylon	20	2,274	3
China	139	14,003	5
Netherland East Indies	80	15,367	10
French Indo-China	14	1,909	
Hongkong	4	298	6
Japan	62	8,908	29
Philippine Islands	48	5,000	2
Syria	16	1,976	
Turkey	4	467	
Australia			
British Oceania			1,183
French Oceania	1	123	80
New Zealand	1	109	
Belgian Congo			1
British East Africa	4	362	363
Union of South Africa	95	11,508	8
Gold Coast			1,761
Nigeria	12	870	
Other British West Africa			
Egypt	13	1,584	7
Algeria and Tunisia	210	16,115	31
Morocco	86	12,766	21
Mozambique			
Canary Islands	1	143	
Total	3,710	\$317,711	1,560
Shipments to Hawaii	125	\$ 13,414	32
Porto Rico	82	\$ 10,847	7
			\$ 5,156
			\$ 1,880
			\$ 253,461
			\$ 6,990
			\$ 1,512

THE CONDENSER

PAYMENT IN ADVANCE is required for advertising in this column. The following rates apply:

POSITIONS WANTED—Fifty words or less, one insertion \$2.00, additional words four cents each. Three insertions \$5.00, additional words ten cents each. ALL OTHER CLASSIFICATIONS—Fifty words or less, one insertion \$3.00, additional words six cents each. Three insertions \$8.00, additional words sixteen cents each.

REPLIES to advertisements with box numbers should be addressed to the box number in care of Electric Refrigeration News, 550 Maccabees Building, Detroit, Mich.

POSITIONS AVAILABLE

SEE advertisement below in this column.

WANTED—Salesman who has capacity to organize selling force on popular make domestic refrigerator. Also capable salesman on commercial refrigeration. Our company occupies a foremost position in this section and capable men will find this a wonderful opportunity. Experience is necessary. Correspondence or personal interview solicited. Box 475.

POSITIONS WANTED

WANT PUBLICITY? What it takes to get it, I've got! Behind me: Eleven years' experience in newspaper, electric refrigeration, radio fields that's hard to beat! Ahead of me: A connection with a manufacturer wanting effectively to tell the world about his products. Are you that manufacturer? Box 472.

REFRIGERATION SALES MERCHANDISER wants position with manufacturer or allied supplier. Has thorough knowledge of distribution through manufacturer, distributor and dealer. Successful record of 12 years actual field experience in sales promotion, territory analysis, and personnel training. Age, 38 years, not opposed to extensive traveling and available for any location assignment. Reply Box 476.

EQUIPMENT FOR SALE

WE have a few Zerozone coils and compressor units—Ebeco water coolers and Larkin coils that can be bought very reasonably. Communicate with The Elin Company, Oil Burner Division, 328 Washington St., Newark, N. J.

High Grade Salesmen WANTED

Salesmen who have been contacting distributors and dealers in refrigeration and allied lines and can show earnings of \$10,000 or better per year. Product: high-priced specialty manufactured by 43-year-old firm rated AAA-1. Men with distributor following in Boston, Philadelphia, Cleveland, Detroit, Minneapolis, Atlanta, New Orleans, Kansas City, Los Angeles especially desired. Salary and bonus arrangement for men selected. Write giving complete experience and references.

Address Box 474
Electric Refrigeration News

Children Plead Case Of Refrigeration Engineer

DETROIT—President Hoover's calendar the other day had the following item: "Bernice, Irene and Clifford Feagan, children of Charles F. Feagan, Detroit, calling to intercede in behalf of their father arrested recently under the Dyer Act, charged with stealing an automobile at St. Joseph, Mo."

President Hoover saw the children, who are aged 13, 11, and 10. When they left the White House they had been assured that their father would be freed.

Feagan gave his occupation as "refrigeration engineer," and the Federal Investigation Bureau reported that he had worked for Detroit Edison Co. in this capacity, although Detroit Edison Co. could not find his name on their records, they declared.

The arrest was under the Dyer Act. Laid off last spring, Feagan went to Missouri in search of work. He returned with an automobile which he said a Missouri man gave him to sell in Detroit that he might earn the commission. Missouri authorities claim the car was stolen.

The three children were certain that their father should not be in jail. Befriended by bus line officials, by storekeepers who outfitted them for their trip, and by spectators who crowded about as they started, Bernice, Irene and Clifford set off "to see Mr. Hoover."

OHIO PUBLIC SERVICE GROUP VISITS FRIGIDAIRE

DAYTON—Headed by J. B. Johnson, vice president, representatives of the Ohio Public Service Co. made a trip through Frigidaire plants here last week.

Included in the party, which was accompanied here from Cleveland by C. V. Patterson, Frigidaire representative, were: C. S. McIntyre, George A. Robson, Jr., W. C. Schultz, H. C. Thompson, E. F. Cheetham, J. W. Burke, L. W. Clauser, and A. H. Stevenson.